MSA-S-1829-5657

PO Box 2209

Prince Frederick, MD 20678

Phone: 410-535-3101 • 301-855-1599

Fax: 410-535-3103

Email: kulrich@coainc.com

Memo

To:

Chesapeake Bay Critical Area Commission

Attre

Mary Owens

From:

Keith E. Ulrich, COA Project Manager

CC:

File

Date:

September 14, 2006

Project:

Harbours at Solomons

Re:

20% Rule Calculation - Additional information

Mary,

Attatched please find additional 20% rule Calculations. The following items provided:

- 1. Area 1, 2, 3-4, 5, 6 series computations for zero loading. For area 1, 2, 3-4, and ,6 WQv , Forebay, Permanent Pool Volume and routing computation for Multi pond area 1, Wet Ed pond area 2, Wet ED Pond Area 3&4, and Multiple pond area six. For area 5 a bio retention worksheet for WQv vs. surface area.
- 2. Contec information on Stormfilter
- 3. 30 scale drawings of pond and bio retention sites graded.
- 4. 100 scale of overall site with pond and bio retention grading.

5. SWM Letter of Understanding

Any questions give me a call.

Surveyors ~ Engineers ~ Land Planners 288 Merrimac Court

Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: LOCATION: Sol. Harbour

JOB #:

Dowell Rd Area 2 1-8667

RE-DEVELOPMENT

STEP 1:

Estimate parameters.

			Pre - Dev.	Post - Dev.
A (Total are	ea)	=	4.63 acres	4.63 acres
la:	Bldg.	=	0.01 acres	0.94 acres
	Pave	=	0.46 acres	0.94 acres
	Alleys	=	0.00 acres	0.19 acres
	Conc.	=	0.05 acres	0.00 acres
	Sidewlk	=	0.00 acres	0.48 acres
	Gravel	=	0.26 acres	0.00 acres
	Drives	Ξ	0.00 acres	0.18 acres
	Total	=	0.78 acres	2.73 acres
I= (la Tot / /	A)	=	17%	59%
Rv=0.05+0.	009*1	=	0.20	0.58
C:		=	0.3 mg/l	0.3 mg/l

STEP 2: Calculate the pre-development load (L pre).

[(Rv x C x A x 8.16)] L pre

2.3 lbs./year

STEP 3: Calculate the post-development load (L post).

[(Rv x C x A x 8.16)] L post

6.6 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

L post - (0.8 * L pre)

4.8 lbs.

STEP 5: Select BMP options using the screening tools and list them below.

Then calculate the load removal for each option.

SELECTED BMP OPTION	REMOVAL EFFICIENCY %	SERIES DEVICE EFFICIENCY 50%	FRACTION D. A. SERVED	Х	L post	=	LOAD REMOVE Ibs.	D	RR Balance lbs.	
Wet ED Pond	60%	х	100.0%	х	6.6	=	4.0	lbs.	0.8	lbs.
Storm Filter	50%	25%	48.0%	х	6.6	=	0.8	lbs.	0.0	lbs.
		Х		х		=		lbs.	0.0	lbs.
		х		х		=		lbs.	0.0	lbs.
		X		X		=		lbs.	0.0	lbs.
		Х		Х		=		lbs.	0.0	lbs.

Offset Requried 0.0 lbs.

^{**} If the LOAD REMOVED is equal or greater than the pollutant removal requirement (RR) calculated in STEP 4, then the on-site BMP options(s) comply with the Critical Area 20% Rule.

Surveyors - Engineers - Land Planners P.O. Box 2209 Prince Frederick, Maryland 20678

410-535-3101 : 301-855-1599 : Fax 410-535-3103

Water Quality & Recharge Volume Computation Sheet

Site:			HAS				
Location:		First D		rt County MD			
COA Authorization #:		1-8667					
Date:		August 3, 2006					
Designer:			KEU				
For:			CC GRO	UP			
Drainage Area :			2				
Vater Quality Volume -	WQv				Mark Market Sh		
Drainage Area(A):	4.63	Aoroo					
Impervious Area (I):	2.73	Acres Acres					
Precipitation (P):	1.00	inches					
r recipitation (i / .]	1.00	I littles					
	% Im	pervious cover	= I/A=	58.96			
Rv =0.05+0.009(I) =	0.58						
	WOV	(Ac-ft) = (P)(Rv	/\(Δ\/12 = \	0.22			
Sites w/ < 15% In	op cover - WO	(Acre-ft) = (0.2)	P(A)/12 = 1	0.08	· · · · · · · · · · · · · · · · · · ·		
Olico W/ 1 10 /0 III	ip. cover - vvav		Acre-ft) =	0.22	AND DESCRIPTION OF STREET		
Drainage Area (A) : Impervious Area (I) :	4.63 2.73	Acres Acres					
Precipitation (P):	1.00	inches					
0/ Importious covo	r (I) = Importious	Aron Dina Ba	of / D A =	E9.00			
% Impervious cove	r (i) = impervious	Area - Disc Ro	OT / D A =	58.96			
		7,1100 2100 110					
Rv =0.05+0.009(I) =	0.58						
				S	Composite S		
ISG So	0.58 oil Area w/in DA 0.00			S 0.38	Composite S 0.00		
ISG Soil	oil Area w/in DA	% of Tota			Composite S 0.00 0.00		
ISG Soil Soil	oil Area w/in DA 0.00	% of Tota		0.38	0.00		
ISG Soil Soil Soil	0.00 0.00	% of Tota 0% 0%		0.38 0.26	0.00 0.00		
HSG Soil Soil Soil	0.00 0.00 0.00 0.00 0.00	% of Tota 0% 0% 0%	I D.A.	0.38 0.26 0.13 0.07	0.00 0.00 0.00		
HSG Soil Soil Soil	oil Area w/in DA 0.00 0.00 0.00 0.00 Total Cor	% of Tota 0% 0% 0% 0% 0% posite Soil Spe	I D.A.	0.38 0.26 0.13 0.07 Factor	0.00 0.00 0.00 0.00		
ISG Soil Soil Soil Soil Soil Soil	oil Area w/in DA 0.00 0.00 0.00 0.00 Total Cor	% of Tota 0% 0% 0% 0% nposite Soil Spe	I D.A. ecific Range	0.38 0.26 0.13 0.07 Factor ctices - Rev)	0.00 0.00 0.00 0.00		
ISG Soil Soil Soil Soil Soil Soil	oil Area w/in DA 0.00 0.00 0.00 Total Cor Percent Volu /olume in Acre-ft	% of Tota	ecific Range tructural Practical	0.38 0.26 0.13 0.07 Factor ctices - Rev)	0.00 0.00 0.00 0.00		
ISG Soil Soil Soil Soil Soil Soil	oil Area w/in DA 0.00 0.00 0.00 Total Cor Percent Volu /olume in Acre-ft	% of Tota 0% 0% 0% 0% nposite Soil Spe	ecific Range tructural Practical	0.38 0.26 0.13 0.07 Factor ctices - Rev)	0.00 0.00 0.00 0.00		
ISG Soil Soil Soil Soil Soil	oil Area w/in DA 0.00 0.00 0.00 Total Cor Percent Volu /olume in Acre-ft Percent Area	% of Tota 0% 0% 0% 0% nposite Soil Sp me Method (S (Rev) = (S)(Rv	ecific Range tructural Practical	0.38 0.26 0.13 0.07 Factor ctices - Rev)	0.00 0.00 0.00 0.00		
HSG Soil Soil Soil Soil Soil Soil Soil	oil Area w/in DA 0.00 0.00 0.00 Total Cor Percent Volu /olume in Acre-ft Percent Area ious Cover (Ai)=	% of Tota 0% 0% 0% 0% nposite Soil Spe me Method (S (Rev) = (S)(Rv Method (Non-S	ecific Range structural Prace (A)/12 = Structural Prace Acres	0.38 0.26 0.13 0.07 Factor ctices - Rev)	0.00 0.00 0.00 0.00		

Surveyors - Engineers - Land Planners

P.O. Box 2209 Prince Frederick, Maryland 20678

410-535-3101: 301-855-1599: Fax 410-535-3103

Forebay Computation Sheet

Site:			HAS							
Location:		SOLOMONS								
OA Authorization #:		1-8667								
Date:		August 3, 2006								
Designer:		KEU								
For:			CC GROUP							
Drainage Area :			2							
ebay WQv vs Depth										
Contour	Area	Depth	Volume cf	Cum Vol. Cf	Cum Vol ac-					
4	2772									
		1	3358	3358						
5	3944				0.08					
		1	4608	7966						
6	5271				0.18					
					 					
Fore	bay sized on 0.1 in	ch of runoff from impe	ervious area. 2.73 acı	res impervious	-1					
1016										
	/Qv Volume Requir		/olume provided at d							

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410-535-3101: 301-855-1599: Fax 410-535-3103

Permanent Pool Volume Computation Sheet for WQv

Site:			HAS							
Location:		SOLOMONS 1-8667								
COA Authorization #:										
Date:		August 3, 2006								
Designer:		KEÚ								
For:			CC GROUP							
Drainage Area:			2							
epth vs Volume Perm	anent Pool									
Contour	Area	Depth	Volume cf	Cum Vol. Cf	Cum Vol ac-					
1	692	THE PERSON NAMED IN								
		1	1096	1096						
2	1500				0.03					
		1	2098	3194						
3	2696				0.07					
		1	4748	7942						
4	6800				0.18					
		1	7927.5	15869.5						
5	9055				0.36					
		1	10068.5	25938						
6	11082				0.60					
		1	11861	37799						
7	12640				0.87					
		1	13482.5	51281.5						
8	14325				1.18					
	10701	1	16523	67804.5						
9	18721				1.56					
Volume Req	uired: WQv (After cr	redits Applied) = 0.22	ac ft Volume p	rovided at depth =	4.22					
		This volume include		•						

Type.... Master Network Summary Name.... Watershed Page 1.01

File.... Q:\LDDR-3\Keith\1-8667HASDOC\DOCS\SWM\Area 2\HASPST2.PPW

MASTER DESIGN STORM SUMMARY

Network Storm Collection: Calvert County

Return Event	Total Depth in	Rainfall Type	RNF ID
Dev 1	2.8000	Synthetic Curve	TypeII 24hr
Dev 2	3.4000	Synthetic Curve	TypeII 24hr
Dev 10	5.3000	Synthetic Curve	TypeII 24hr
Dev100	7.6000	Synthetic Curve	TypeII 24hr

MASTER NETWORK SUMMARY SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;) (Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Return Type Event	HYG Vol ac-ft Trun	Qpeak 'hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
*OUT AREA 2	JCT 1	.612	12.0700	11.68		
*OUT AREA 2	JCT 2	.829	12.0700	15.06		
*OUT AREA 2	JCT 10	1.534	12.0600	26.45		
*OUT AREA 2	JCT 100	2.404	12.0500	40.72		
POND AREA 2 IN	POND 1	.727	12.0200	13.51		
POND AREA 2 IN	POND 2	. 944	12.0200	17.33	•	
POND AREA 2 IN	POND 10	1.649	12.0200	29.39		
POND AREA 2 IN	POND 100	2.519	12.0200	43.77		
POND AREA 2 OUT	POND 1	.612	12.0700	11.68	5.76	.175
POND AREA 2 OUT	POND 2	.829	12.0700	15.06	5.83	.193
POND AREA 2 OUT	POND 10	1.534	12.0600	26.45	6.04	.246
POND AREA 2' OUT	POND 100	2.404	12.0500	40.72	6.22	.290

S/N: 621201F2E1CA PondPack Ver. 9.0029 Collinson, Oliff & Associates Time: 3:36 PM

Date: 9/5/2006

Type.... Master Network Summary

Page 1.02 ,

Name.... Watershed

File.... Q:\LDDR-3\Keith\1-8667HASDOC\DOCS\SWM\Area 2\HASPST2.PPW

MASTER NETWORK SUMMARY SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Re Type Ev	turn ent	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
SUB 2 POST	AREA	1	.727		11.9200	13.51		
SUB 2 POST	AREA	2	.944		11.9200	17.33		
SUB 2 POST	AREA	10	1.649		11.9200	29.39		
SUB 2 POST	AREA	100	2.519		11.9200	43.77		

S/N: 621201F2E1CA PondPack Ver. 9.0029 Collinson, Oliff & Associates

Time: 3:36 PM

Date: 9/5/2006

Surveyors ~ Engineers ~ Land Planners 288 Merrimac Court

Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: LOCATION:

Sol. Harbour Dowell Rd Area 3&4 1-8667

JOB #:

RE-DEVELOPMENT

STEP 1:

Estimate parameters.

			Pre - Dev.		Pos	st - Dev.
A (Total area	1)	=	13.95	acres	13.95	acres
la:	Bldg.	=	0.05	acres	2.84	acres
	Pave	=	0.04	acres	2.62	acres
	Alleys	=	0.00	acres	0.41	acres
	Conc.	=	0.40	acres	0.00	acres
	Sidewlk	=	0.00	acres	1.12	acres
	Gravel	=	1.78	acres	0.00	acres
	Drives	Ξ	0.00	acres	0.77	acres
	Total	=	2.27	acres	7.76	acres
I= (Ia Tot / A)	=	16%		56%	
Rv=0.05+0.0	09*1	=	0.19		0.55	
C:		=-	0.3	ma/l	0.3	ma/l

STEP 2: Calculate the pre-development load (L pre).

L pre = $[(Rv \times C \times A \times 8.16)]$

= "

6.5 lbs./year

STEP 3: Calculate the post-development load (L post).

L post = $[(Rv \times C \times A \times 8.16)]$

18.8 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR = L post - (0.8 * L pre)

=

13.6 lbs.

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED BMP OPTION	REMOVAL EFFICIENCY %	SERIES DEVICE EFFICIENCY 50%	FRACTION D. A. SERVED	×	L post (STEP 3)	=	LOAD REMOVE lbs.	D	RR Balance lbs.	
Wet ED pond	60%	X	100.0%	X	18.8	=	11.3	lbs.	2.3	lbs.
Storm Filter	50%	25%	49.0%	X	18.8	=	2.3	lbs.	0.0	lbs.
		x		X		=		lbs.	0.0	lbs.
		X		х		=		lbs.	0.0	lbs.
		X		X		=		lbs.	0.0	lbs.
		Х		х		=		lbs.	0.0	lbs.

Offset Required = 0.0 lbs.

^{**} if the LOAD REMOVED is equal or greater than the pollutant removal requirement (RR) calculated in STEP 4, then the on-site BMP options(s) comply with the Critical Area 20% Rule.

Surveyors - Engineers - Land Planners

P.O. Box 2209 Prince Frederick, Maryland 20678

410-535-3101: 301-855-1599: Fax 410-535-3103

Water Quality & Recharge Volume Computation Sheet

Site:		u	AS				
Location:							
COA Authorization #:		First District Calvert County MD 1-8667					
Date:	177	August 3, 2006					
Designer:		KEU					
For:			ROUP				
101.		000	ikour	-			
Drainage Area :		3.	&4				
Vater Quality Volume - 1	NQ V						
Drainage Area(A):	13.95	Acres					
Impervious Area (I):	7.76	Acres					
Precipitation (P):	1.00	inches					
r recipitation (r) :	1.00	Inones					
	% I	mpervious cover = I/A=	55.63				
Dv =0.05+0.000(l) =1	0.55						
Rv =0.05+0.009(I) =	0.55						
	WQ	v (Ac-ft) = (P)(Rv)(A)/12 =	0.64				
Sites w/ < 15% Im		Qv (Acre-ft) = (0.2)(A)/12 =					
		WQv (Acre-ft) =		DESCRIPTION OF MARKET			
Drainage Area (A):	4.94	Acres					
Impervious Area (I):	2.51	Acres					
Precipitation (P):	1.00	inches					
% Impervious cover	(I) = Imperviou	us Area - Disc Roof / D A =	50.81				
Rv =0.05+0.009(I) =	0.51						
ISG Sc	il Area w/in DA	% of Total D.A.	S	Composite S			
Soil	0.00	0%	0.38	0.00			
3 Soil	0.00	0%	0.26	0.00			
Soil	0.00	0%	0.13	0.00			
Soil	0.00	0%	0.07	0.00			
	Total Co	omposite Soil Specific Ran	ige Factor	0.00			
	Percent Vol	ume Method (Structural)	Practices - Rev)				
		ano monou (on dotard)	1400000 11017				
Groundwater Recharge V	olume in Acre-	ft $(Rev) = (S)(Rv)(A)/12 =$	0.00				
	Percent Are	a Method (Non-Structural	Practices - Rev)				
Measured impervi	ous Cover (Ai)	= 2.51 Acres					
Measured impervi	ous Cover (Ai)	= 2.51 Acres					

Surveyors - Engineers - Land Planners

P.O. Box 2209 Prince Frederick, Maryland 20678

410-535-3101: 301-855-1599: Fax 410-535-3103

Forebay Computation Sheet

Site:			HAS							
Location:		SOLOMONS								
OA Authorization #:		1-8667								
Date:	CSI DO DO	August 3, 2006								
Designer:			KEU							
For:			CC GROUP							
Drainage Area :			3&4							
rebay WQv vs Depth										
Contour	Area	Depth	Volume cf	Cum Vol. Cf	Cum Vol ac-					
4	3064			7 - 1 - 1 - 1 - 1						
		1	3539	3539						
5	4014				0.08					
		1	4549	8088						
6	5084				0.19					
Foreb	pay sized on 0.1 in	ch of runoff from impe	ervious area. 7.76 aci	res impervious						

Volume provided at depth = 6.0

WQv Volume Provided = 0.19 ac ft

Surveyors - Engineers - Land Planners

P.O. Box 2209 Prince Frederick, Maryland 20678

410-535-3101: 301-855-1599: Fax 410-535-3103

Permanent Pool Volume Computation Sheet for WQv

Location:			HAS						
Location.			SOLOMONS						
COA Authorization #:			1-8667						
Date:	August 3, 2006								
Designer:	KEU CC GROUP								
For:									
Drainage Area:			3&4						
epth vs Volume Perman	ent Pool								
Contour	Area	Depth	Volume cf	Cum Vol. Cf	Cum Vol ac-f				
1	2046								
		1	2515	2515					
2	2984				0.06				
		1	3532	6047					
3	4079				0.14				
		1	6236	12283					
4	8393				0.28				
		1	9572	21854					
5	10750				0.50				
	40000	1	12066	33920					
6	13382	4	44004	40754	0.78				
7	16285	1	14834	48754	4.40				
	10263	1	17663	00440	1.12				
8	19040		17003	66416	4.50				
0	13040	1	20446	86862	1.52				
9	21852		20440	00002	1.99				
	21002				1.33				
Volume Requir	ed: WQv (After cr	edits Applied) = 0.64	ac ft Volume p	rovided at depth =	5.50				
		This volume include							

Type.... Master Network Summary

Name.... Watershed

File.... Q:\LDDR-3\Keith\1-8667HASDOC\DOCS\SWM\Area 3&4\HASPST3&4.PPW

Page 1.01

MASTER DESIGN STORM SUMMARY

Network Storm Collection: Calvert County

Return Event	Total Depth in	Rainfall Type	RNF ID
Dev 1 Dev 2 Dev 10	2.8000 3.4000 5.3000	Synthetic Curve Synthetic Curve Synthetic Curve	TypeII 24hr TypeII 24hr TypeII 24hr
Dev100	7.6000	Synthetic Curve	TypeII 24hr

MASTER NETWORK SUMMARY SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Туре	Return Event	HYG Vol ac-ft Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
*OUT AREA 3/4	JCT	1	2.094	12.0900	33.94		
*OUT AREA 3/4	JCT	. 2	2.737	12.0800	44.42		
*OUT AREA 3/4	JCT	, 10	4.843	12.0700	77.55		
*OUT AREA 3/4	JCT	100	7.454	12.0700	117.29		
POND AREA 3/4IN	POND	1	2.094	12.0400	37.22		
POND AREA 3/4IN	POND	2	2.737	12.0400	48.19		
POND AREA 3/4IN	POND	10	4.843	12.0300	82.91		
POND AREA 3/4IN	POND	100	7.454	12.0300	124.58		
POND AREA 3/40UT	POND	1	2.094	12.0900	33.94	6.12	.182
POND AREA 3/40UT	POND	2	2.737	12.0800	44.42	6.24	.221
POND AREA 3/40UT	POND	10	4.843	12.0700	77.55	6.60	.340
POND AREA 3/40UT	POND	100	7.454	12.0700	117.29	6.95	.467

S/N: 621201F2E1CA PondPack Ver. 9.0029 Collinson, Oliff & Associates Time: 3:40 PM

Date: 9/5/2006

Type.... Master Network Summary Name.... Watershed

Page 1.02

File.... Q:\LDDR-3\Keith\1-8667HASDOC\DOCS\SWM\Area 3&4\HASPST3&4.PPW

MASTER NETWORK SUMMARY SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Return Type Event	HYG Vol	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
SUB 3/4 POST SUB 3/4 POST	AREA 1 AREA 2	2.094	11.9400	37.22 48.19		
SUB 3/4 POST SUB 3/4 POST	AREA 10 AREA 100	4.843 7.454	11.9300 11.9300	82.91 124.58		

S/N: 621201F2E1CA PondPack Ver. 9.0029 Collinson, Oliff & Associates

Time: 3:40 PM

Date: 9/5/2006

Surveyors ~ Engineers ~ Land Planners 288 Merrimac Court

Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: LOCATION: Sol. Harbour Dowell Rd Area 5 1-8667

JOB#:

NEW DEVELOPMENT

STEP 1:

Estimate parameters.

			Pre - Dev.	Post - Dev.
A (Total	area)	=	2.12 acres	2.12 acres
la:	Bldg.	= 1	0.03 acres	0.04 acres
	Pave	=	0.00 acres	0.22 acres
	Alleys	=	0.00 acres	0.00 acres
	Conc.	=	0.01 acres	0.00 acres
	Sidewlk	=	0.00 acres	0.16 acres
	Gravel	=	0.25 acres	0.00 acres
	Drives	Ξ	0.00 acres	0.00 acres
	Total	=	0.29 acres	0.42 acres
I= (Ia To	t / A)	=	14%	20%
Rv=0.05	+0.009*I	=	0.18	0.23
C:		=	0.3 mg/l	0.3 mg/l

STEP 2: Calculate the pre-development load (L pre).

L pre 0.5 x A

1.1 lbs./year

STEP 3: Calculate the post-development load (L post).

L post

[(Rv x C x A x 8.16)]

1.2 lbs./year

0.3 lbs.

STEP 4: Calculate the pollutant removal requirement (RR).

L post - (0.8 * L pre)

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED BMP OPTION	REMOVAL EFFICIENCY %	SERIES DEVICE EFFICIENCY 50%	FRACTION D. A. SERVED	x	L post (STEP 3)	=	LOAD REMOVED lbs.	RR Balance lbs.	
Bio Retention Area	50%	х	50.0%	X	1.2	=	0.3 lbs	0.0	lbs.
		0%	0.0%	Х	1.2	=	lbs	0.0	lbs.
		X		X		=	lbs	0.0	lbs.
		X		X		=	Ibs	0.0	lbs.
		X		X		=	lbs	0.0	lbs.
		Х		X		=	lbs	. 0.0	lbs.

Offset Requried 0.0 lbs.

^{**} If the LOAD REMOVED is equal or greater than the pollutant removal requirement (RR) calculated in STEP 4, then the on-site BMP options(s) comply with the Critical Area 20% Rule.

Surveyors - Engineers - Land Planners

P.O. Box 2209 Prince Frederick, Maryland 20678

410-535-3101: 301-855-1599: Fax 410-535-3103

Water Quality & Recharge Volume Computation Sheet

Site:			HAS	
Location:			Calvert County MD	
COA Authorization #:			1-8667	
Date:			ust 3, 2006	
Designer:			KEU	
For:		CC	GROUP	
Drainage Area :			5	
later Quality Volume	- WQv			
Drainage Area(A):	2.12	Acres		
Impervious Area (I):	0.42	Acres		
Precipitation (P):		inches		
	% 11	mpervious cover = 1/	A = 19.81	
		Tipervious cover = 177	A = 10.01	
Rv =0.05+0.009(I) =	0.23			
	WQ	v (Ac-ft) = (P)(Rv)(A)/12	2 = 0.04	
Sites w/ < 15%	Imp. cover - WC	Qv (Acre-ft) = (0.2)(A)/12	2 = 0.04	
		WQv (Acre-ft) = 0.04	
Townstander Dechar	no Volume Dov			
roundwater Rechard	je volume - Rev			
Drainage Area (A):		Acres		
Impervious Area (I):	0.42	Acres		
Precipitation (P):	1.00	inches		
% Impervious co	ver (I) = Imperviol	us Area - Disc Roof / D	A = 19.81	
	0.23			
Rv =0.05+0.009(I) =				
Rv =0.05+0.009(I) =	Soil Area w/in DA		S	Composite S
Rv =0.05+0.009(I) = SG Soil	Soil Area w/in DA	0%	0.38	0.00
Rv =0.05+0.009(I) = SG Soil Soil	Soil Area w/in DA 0.00 0.00	0% 0%	0.38 0.26	0.00 0.00
Rv =0.05+0.009(I) = SG Soil Soil Soil	Soil Area w/in DA 0.00 0.00 0.00	0% 0% 0%	0.38 0.26 0.13	0.00 0.00 0.00
Rv =0.05+0.009(I) = SG Soil Soil Soil	Soil Area w/in DA 0.00 0.00 0.00 0.00	0% 0% 0% 0%	0.38 0.26 0.13 0.07	0.00 0.00 0.00 0.00
Rv =0.05+0.009(I) = ISG Soil Soil Soil	Soil Area w/in DA 0.00 0.00 0.00 0.00	0% 0% 0%	0.38 0.26 0.13 0.07	0.00 0.00 0.00
Rv =0.05+0.009(I) = ISG Soil Soil Soil	Soil Area w/in DA 0.00 0.00 0.00 0.00 Total Co	0% 0% 0% 0%	0.38 0.26 0.13 0.07 Range Factor	0.00 0.00 0.00 0.00
Rv =0.05+0.009(I) = SG Soil Soil Soil Soil	Soil Area w/in DA 0.00 0.00 0.00 0.00 Total Co	0% 0% 0% 0% omposite Soil Specific R	0.38 0.26 0.13 0.07 Range Factor	0.00 0.00 0.00 0.00
Rv =0.05+0.009(I) = ISG Soil Soil Soil Soil	Soil Area w/in DA 0.00 0.00 0.00 Total Co Percent Vol e Volume in Acre-	0% 0% 0% 0% pmposite Soil Specific R ume Method (Structur ft (Rev) = (S)(Rv)(A)/12	0.38 0.26 0.13 0.07 Range Factor ral Practices - Rev) 2 = 0.00	0.00 0.00 0.00 0.00
Rv =0.05+0.009(I) = ISG Soil Soil Soil Soil	Soil Area w/in DA 0.00 0.00 0.00 Total Co Percent Vol e Volume in Acre-	0% 0% 0% 0% pmposite Soil Specific R ume Method (Structur ft (Rev) = (S)(Rv)(A)/12 a Method (Non-Structur	0.38 0.26 0.13 0.07 Range Factor ral Practices - Rev) 2 = 0.00 ral Practices - Rev)	0.00 0.00 0.00 0.00
Rv =0.05+0.009(I) = SG Soil Soil Soil Soil	Soil Area w/in DA 0.00 0.00 0.00 Total Co Percent Vol e Volume in Acre-	0% 0% 0% 0% pmposite Soil Specific R ume Method (Structur ft (Rev) = (S)(Rv)(A)/12 a Method (Non-Structur	0.38 0.26 0.13 0.07 Range Factor ral Practices - Rev) 2 = 0.00 ral Practices - Rev)	0.00 0.00 0.00 0.00

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Bioretention WQV vs Surface area

Site:			LIAC					
Location:		Firef	HAS District Calve		D			
COA Authorization #:	First District Calvert County MD 1-8667							
Date:		August 3, 2006						
Designer:		KEÚ						
For:			CC GRO					
Drainage Area :			5					
Notor Quality Volume	NOV							
Water Quality Volume - V	VQV							
	Af =	(WQv)(df)	/ ((K)(hf+df)(tf))				
WQv Required:	0.04							
Total:	0.04							
k = Coofficient of	- 10th	/ft/-1. \						
k = Coefficient of permeal of = Average Height of W	later Above Filter	(IT/day)			0.5 0.5			
ii = Average neight of w	ater Above Filter	Bed			0.5			
df = Filter Red Denth								
	n Time (2.0 Days	for Rioreter	ation)		2.5			
df = Filter Bed Depth tf = Design Filter Bed Drai WQv = Water Quality volu	n Time (2.0 Days	for Bioreter	ntion) Dv & Rev Comb	ined)	2.5			
	ime (Ac Ft) (Can be WC	ntion) Qv & Rev Comb	ined)	2.5 2 0.04			
tf = Design Filter Bed Drai WQv = Water Quality volu	ime (Ac Ft) (Can be WC	ntion) Qv & Rev Comb	ined)	2.5			
tf = Design Filter Bed Drai WQv = Water Quality volu	ume (Ac Ft) (i ume in Cubic Feet	Can be WC	Qv & Rev Comb		2.5 2 0.04			
tf = Design Filter Bed Drai WQv = Water Quality volu	ume (Ac Ft) (i ume in Cubic Feet	Can be WC	ntion) Qv & Rev Comb er Bed (sq ft)	ined) 1452	2.5 2 0.04			
tf = Design Filter Bed Drai WQv = Water Quality volu	ume (Ac Ft) (ume in Cubic Feet Surface A	Can be WC	Qv & Rev Comb		2.5 2 0.04			
tf = Design Filter Bed Drai WQv = Water Quality volu WQv = Water Quality Volu	ume (Ac Ft) (ume in Cubic Feet Surface A	Can be WC	er Bed (sq ft)	1452	2.5 2 0.04			
tf = Design Filter Bed Drai WQv = Water Quality volu	ume (Ac Ft) (ume in Cubic Feet Surface A	Can be WC	er Bed (sq ft)	1452	2.5 2 0.04			
tf = Design Filter Bed Drai WQv = Water Quality volu WQv = Water Quality Volu	Surface Are Surface Are mputation	Can be WC	er Bed (sq ft) Bed (Ac - ft)	1452	2.5 2 0.04			
tf = Design Filter Bed Drai WQv = Water Quality volu WQv = Water Quality Volu Bedimentation Basin Con	Surface Are Surface Are Drainage Area:	Can be WO	er Bed (sq ft)	1452	2.5 2 0.04			
tf = Design Filter Bed Drai WQv = Water Quality volu WQv = Water Quality Volu Sedimentation Basin Con	Surface Are Surface Are mputation	Can be WC	er Bed (sq ft) Bed (Ac - ft) Acres	1452	2.5 2 0.04			
tf = Design Filter Bed Drai WQv = Water Quality volu WQv = Water Quality Volu Gedimentation Basin Con Ir Drainage area	Surface Area: mputation Drainage Area: mpervious Area: a Impervious %:	Area of Filter 2.2 0.42	er Bed (sq ft) Bed (Ac - ft) Acres	0.03	2.5 2 0.04 1,742			
tf = Design Filter Bed Drai WQv = Water Quality volu WQv = Water Quality Volu Gedimentation Basin Cor Ir Drainage area	Surface Area: mpervious Area:	Area of Filter 2.2 0.42	er Bed (sq ft) Bed (Ac - ft) Acres Acres	1452	2.5 2 0.04			
tf = Design Filter Bed Drai WQv = Water Quality volu WQv = Water Quality Volu Gedimentation Basin Cor Ir Drainage area	Surface Area: mputation Drainage Area: mpervious Area: a Impervious %: f =0.066xWqv	Area of Filter 2.2 0.42	Pr Bed (sq ft) Bed (Ac - ft) Acres Acres Asf =	1452 0.03	2.5 2 0.04 1,742 square feet			
tf = Design Filter Bed Drai WQv = Water Quality volu WQv = Water Quality Volu WQv = Water Quality Volu Bedimentation Basin Con Ir Drainage area I < or = 75% Asi I > 75% Asi	Surface Area: mputation Drainage Area: mpervious Area: a Impervious %: f =0.066xWqv	Area of Filter 2.2 0.42	Pr Bed (sq ft) Bed (Ac - ft) Acres Acres Asf =	1452 0.03	2.5 2 0.04 1,742 square feet			

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Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: LOCATION: Sol. Harbour Dowell Rd

Area 6

JOB #:

1-8667

NEW DEVELOPMENT

STEP 1:

Estimate parameters.

		Pre - Dev.		Pos	st - Dev.
A (Total area)	=	10.07	acres	10.07	acres
la: Bldg.	=	0.06	acres	2.15	acres
Pave	=	0.00	acres	0.46	acres
Alleys	s =	0.00	acres	0.19	acres
Conc	. =	0.29	acres	0.00	acres
Sidev	vlk =	0.00	acres	0.37	acres
Grave	el =	0.13	acres	0.00	acres
<u>Drive</u>	<u>s</u> =	0.00	acres	0.28	acres
Total	=	0.48	acres	3.45	acres
I= (Ia Tot / A)	=	5%		34%	
Rv=0.05+0.009*I	=	0.10		0.36	
C:	(=)	0.3	mg/l	0.3	mg/l

STEP 2: Calculate the pre-development load (L pre).

0.5 x A L pre

5.0 lbs./year

STEP 3: Calculate the post-development load (L post).

L post [(Rv x C x A x 8.16)]

8.9 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

L post - (0.8 * L pre)

4.9 lbs.

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED BMP OPTION	REMOVAL EFFICIENCY %	SERIES DEVICE EFFICIENCY 50%	FRACTION D. A. SERVED	x	L post (STEP 3)	=	LOAD REMOVED lbs.	RR Balance lbs.	
Multiple Pond	65%	х	100.0%	Х	8.9	=	5.8 lbs	s0.9	lbs.
		0%		X		=	lbs	-0.9	lbs.
		X		X	4	=	lbs	-0.9	lbs.
		X		X		=	lbs	-0.9	lbs.
		X		X		=	lbs	-0.9	lbs.
		X		X		=	lbs	-0.9	lbs.

Offset Requried (0.9) Ibs.

^{**} If the LOAD REMOVED is equal or greater than the pollutant removal requirement (RR) calculated in STEP 4, then the on-site BMP options(s) comply with the Critical Area 20% Rule.

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Water Quality & Recharge Volume Computation Sheet

Site:		HAS					
Location:	First District Calvert County MD						
COA Authorization #:		1-8667					
Date:		August 3, 2006					
Designer:		KEU					
For:		CC GROUP					
Drainage Area:		6					
Vater Quality Volume - V	WOV						
ato. Quality rolamo							
Drainage Area(A):	10.07	Acres					
Impervious Area (I):	3.45	Acres					
Precipitation (P):	1.00	inches					
	% I	mpervious cover = I/A=	34.26				
Rv =0.05+0.009(I) =	0.36						
	10/0	(A - 4) (D)(D)(A)(A)	0.00				
Cit-0/ 4 4 E 0/ 1	VVQ	v (Ac-ft) = (P)(Rv)(A)/12 =	0.30				
Sites W/ < 15% Im	p. cover - vvc	Qv (Acre-ft) = (0.2)(A)/12 = WQv (Acre-ft) =	0.17				
		,					
roundwater Recharge							
Drainage Area (A):	10.07	Acres					
Impervious Area (I):	3.45	Acres					
Precipitation (P):	1.00	inches					
% Impervious cover	(I) = Imperviou	us Area - Disc Roof / D A =	34.26				
Rv =0.05+0.009(I) =	0.36						
SG Sc	oil Area w/in DA	% of Total D.A.	S	Composite S			
Soil	0.00	0%	0.38	0.00			
Soil	0.00	0%	0.26	0.00			
Soil	0.00	0%	0.13	0.00			
Soil	0.00	0%	0.07	0.00			
		omposite Soil Specific Range		0.00			
	Percent Vol	ume Method (Structural Pra	ectices - Rev				
Groundwater Recharge V	olume in Acre-	ft $(Rev) = (S)(Rv)(A)/12 =$	0.00				
	Percent Area	a Method (Non-Structural Pra	actices - Rev)				
Measured impervi	ous Cover (Ai)	= 3.45 Acres					
		= 3.45 Acres n Acre-ft (Rev) = (S)(Ai) =	0.00				

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Forebay Computation Sheet

Site:			HAS						
Location:			SOLOMONS						
COA Authorization #:			1-8667						
Date:		August 3, 2006							
Designer:			KEU						
For:									
FOI.			CC GROUP						
Drainage Area :			6						
orebay WQv vs Depth				NIRASING COSTON	MINISTER STATES				
Contour	Area	Depth	Volume cf	Cum Vol. Cf	Cum Vol ac-1				
10	703								
		1	924	924					
11	1145				0.02				
		11	1414	2338					
12	1682				0.05				
	haveized on 0.1 in	ch of runoff from impe	ervious area. 3.45 aci	es impervious					
Fore			si vidus di cu. d. to dei	C3 II II PCI VIOUS					
	/Qv Volume Requi		Volume provided at d						

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Permanent Pool Volume Computation Sheet for WQv

Site:			HAS		
Location: COA Authorization #:			SOLOMONS 1-8667		
Date:			ugust 3, 2006		
Designer:		,	KEU		
For:			CC GROUP		
Drainage Area : epth vs Volume Perma	nent Pool		6		
epui vs voiume i enna	ment i doi				
Contour	Area	Depth	Volume cf	Cum Vol. Cf	Cum Vol ac-
5	2391				
		1	3066	3066	
6	3740				0.07
7	5400	1	4464	7530	
	5188	1	F064	12400	0.17
8	6733		5961	13490	0.31
	0700	1	7554	21044	0.31
9	8375		7004	21044	0.48
		1	9776	30820	
10	11176				0.71
		1	12316	43136	
11	13456				0.99
	15050	1	14708	57843	
12	15959		17000		1.33
13	18640	1	17300	75143	1.70
13	10040	1	19819	94962	1.73
14	20998		19019	94962	2.18
17	20330				2.10
Volume Requir	ed: WQv (After cre	edits Applied) = 0.30 a	c ft Volume pr	ovided at depth =	10.92
		This volume include	s forebay		

Type.... Master Network Summary Pack Name.... Watershed File.... Q:\LDDR-3\Keith\1-8667HASDOC\DOCS\SWM\Area 6\HASPST6.PPW Page 1.01

MASTER DESIGN STORM SUMMARY

Network Storm Collection: Calvert County

Return Event	Total Depth in	Rainfall Type	RNF ID
Dev 1	2.8000	Synthetic Curve	TypeII 24hr
Dev 2	3.4000	Synthetic Curve	TypeII 24hr
Dev 10	5.3000	Synthetic Curve	TypeII 24hr
Dev100	7.6000	Synthetic Curve	TypeII 24hr

MASTER NETWORK SUMMARY SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;) (Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Return Type Event	HYG Vol ac-ft Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
*OUT AREA 6	JCT 1	1.252	12.0800	20.74		
*OUT AREA 6	JCT 2	1.687	12.0700	27.85		
*OUT AREA 6	JCT 10	3.145	12.0500	54.08		
*OUT AREA 6	JCT 100	4.988	12.0500	84.40		
POND AREA 6 IN	POND 1	1.252	12.0200	23.59		
POND AREA 6 IN	POND 2	1.687	12.0200	31.69		
POND AREA 6 IN	POND 10	3.145	12.0200	57.94		
POND AREA 6 IN	POND 100	4.988	12.0200	89.76		
POND AREA 6 OUT	POND 1	1.252	12.0800	20.74	11.31	.099
POND AREA 6 OUT	POND 2	1.687	12.0700	27.85	11.42	.134
POND AREA 6 OUT	POND 10	3.145	12.0500	54.08	11.67	.219
POND AREA 6 OUT	POND 100	4.988	12.0500	84.40	11.92	.306

S/N: 621201F2E1CA PondPack Ver. 9.0029 Collinson, Oliff & Associates

Time: 3:42 PM

Date: 9/5/2006

Type.... Master Network Summary Name.... Watershed

File.... Q:\LDDR-3\Keith\1-8667HASDOC\DOCS\SWM\Area 6\HASPST6.PPW

MASTER NETWORK SUMMARY SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;) (Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Ret Type Eve		HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
SUB 6 POST	AREA	1	1.252		11.9200	23.59		
SUB 6 POST	AREA	2	1.687		11.9200	31.69	•	
SUB 6 POST	AREA	10	3.145		11.9200	57.94		
SUB 6 POST	AREA	100	4.988		11.9200	89.76		

Page 1.02

S/N: 621201F2E1CA PondPack Ver. 9.0029 Collinson, Oliff & Associates

Time: 3:42 PM

Date: 9/5/2006

· Total nutrients

Applications

· Organic toxicants

industrial sites

residential sites

and port facilities

Parking lotsArterial roads

· Bridges

· Commercial, municipal, and

· High-density and single-family

· Maintenance, transportation



Filtration Products

he CONTECH Stormwater Solutions division provides filtration Best Management Practices (BMPs) designed to meet the most stringent regulatory requirements for stormwater treatment. Our products remove the most challenging target pollutants using sustainable media – including total suspended solids (TSS), soluble heavy metals, oil and grease, and total nutrients. Product field-proven performance has earned hundreds of standalone BMP approvals from regulatory agencies nationwide. CONTECH Stormwater Solutions has a filtration solution for every site.

Why Filtration?

- Provides the highest treatment level of any standalone, passive BMP
- · Meets the most stringent regulatory requirements
- · Scalable cartridge-based design allows sizing to meet project requirements
- · Targets site-specific pollutants with customized filtration media
- · HS-20 rated, underground BMPs maximize land use

About CONTECH Stormwater Solutions

When you select CONTECH Stormwater Solutions, you'll get much more than stormwater management products. You'll have dedicated, knowledgeable engineers and technical experts to help you select the right technology to meet your regulations. Our organization is committed to preserving water resources by providing customized, site-specific stormwater treatment solutions. And, every product is backed by the most comprehensive lab, field and independent testing in the industry. As one of the four divisions of CONTECH Construction Products – Stormwater, Bridge, Earth Stabilization, and Drainage – we bring you the most comprehensive portfolio of solutions in the industry. Every day. Every site.

The Stormwater Management StormFilter*

- · Siphon-actuated filtration
- Surface cleaning mechanism extends maintenance intervals
- · Uniform sediment loading increases cartridge longevity
- · Five optimized configurations fits different applications
- · Cartridge-based system provides exact sizing
- · Dry sump means no water to remove during maintenance
- · Extensive field verification studies prove performance

VortFilter®

- · Low headloss filtration
- · Up-flow, radial cartridge maximizes surface area
- Efficient design includes pretreatment and sediment storage in one structure

www.contechstorm.com



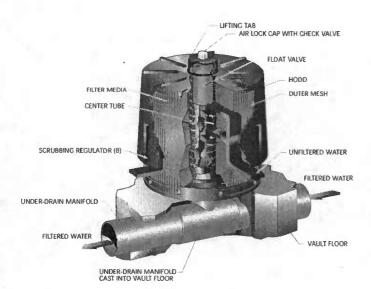
StormFilter

Siphon-actuated filtration

Designed to meet stringent regulatory requirements, The Stormwater Management StormFilter® targets a full range of pollutants in urban runoff. Using a variety of sustainable media and passive filtration, the StormFilter effectively removes TSS, soluble heavy metals, oil and grease, and total nutrients.

The patented surface cleaning system prevents surface blinding and extends the cartridge life cycle as well as maintenance intervals. The StormFilter is cost-effective, highly reliable, and easy to Install.

From small, pre-fabricated catch basins to large box culvert and panel vaults, StormFilter systems are installed underground, leaving valuable land available for development. The compact design also reduces construction and installation costs by limiting excavation.



How does it work?

The StormFilter is a passive, siphon-actuated, media-filled filter cartridge that traps and adsorbs particulates and pollutants.

During a storm, runoff passes through the filtration media and starts filling the cartridge center tube. Air below the hood is purged through a one-way check valve as the water rises. When water reaches the top of the float, buoyant forces pull the float free and allow filtered water to drain.

After the storm, the water level in the structure starts falling. A hanging water column remains under the cartridge hood until the water level reaches the scrubbing regulators. Air then rushes through the regulators releasing water and creating air bubbles that agitate the surface of the filter media, causing accumulated sediment to drop to the vault floor. This patented surface-cleaning mechanism helps restore the filter's permeability between storm events.



Vault StormFilter

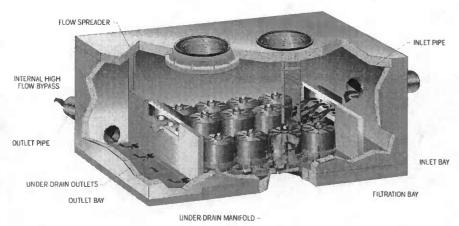
- Site-specific design treats the water quality storm
- Engineered to simplify the entire stormwater system and lower overall cost
- Easy installation arrives on-site fully assembled

High Flow StormFilter

- · One structure for easy installation
- Sized to meet the site-specific treatment rate for lower capital, installation and maintenance costs
- Reduces labor and site work associated with cast-in-place designs

Volume StormFilter

- · Volume-based
- Configured as an entire system or partial system (pretreatment captures the WQv; filtration flow control)
- Low cost installation precast components simplify installation



The Stormwater Management StormFilter*

- An array of filtration media targets sitespecific pollutants
- Designed for maintenance cycles of one year or longer so your filtration system remains active all year long
- Flow-based and volume-based systems available to fit regulations on your project
- Pre-manufactured designs make installation easier, save you time and money
- Cartridge-based systems provide exact sizing for every project
- Dry, or nearly dry, between storm events with optional Drain-Down — no water to remove during maintenance

Media Choices

Our filtration products can be customized using different filter media to target site-specific pollutants. A combination of media is often recommended to maximize pollutant removal effectiveness.



Perlite is naturally occurring puffed volcanic ash. Effective for removing TSS, oil and grease.



CSF⁴ Leaf Media and MetalRx™ are created from deciduous leaves processed into granular, organic media. CSF is most effective for removing soluble metals, TSS, oll and grease, and neutralizing acid rain. MetalRx, a finer gradation, is used for higher levels of metal removal.



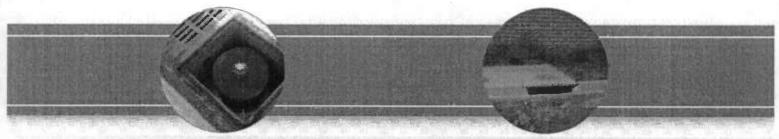
Zeolite is a naturally occurring mineral used to remove soluble metals, ammonium and some organics.



GAC (Granular Activated Carbon) has a micro-porous structure with an extensive surface area to provide high levels of adsorption. It is primarily used to remove oil and grease and organics such as herbicides and pesticides.

	Perlite	CSF	MetalRx	Zeolite	GAC
Sediments	₹4	✓			
Oil and Grease	√ 6	✓	✓	***************************************	00000000000000000000000000000000000000
Soluble Metals		✓	✓	√ è	
Organics		1	✓		√ 6
Nutrients	✓	✓	✓	✓	
-StormFilte	r Applica	tion	♦- VortFil	ter Appl	icatio

Note: Indicated media are most effective for associated pollutant type. Other media may treat pollutants, but to a lesser degree.



CatchBasin StormFilter

- Low cost, ideal for small sites with stringent regulations
- · Low hydraulic profile
- 3-in-1 design: Catch basin, high flow bypass, filtration BMP
- · Easy installation arrives on-site fully assembled

Curb-Inlet StormFilter

- Low drop filtration meets stringent treatment regulations on low drop sites
- Curb inlet installs out of the roadway, and treats sheet flow as it enters the stormwater system
- 3-in-1 design reduces costs and simplifies design

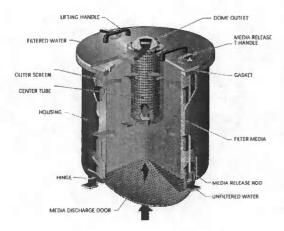
VortFilter®

Low headloss filtration

Using a powerful combination of three proven treatment processes in one system, VortFilter* is engineered to effectively remove very fine particulates, which carry nutrients, metals, hydrocarbons and other contaminants from urban runoff.

The use of radial flow cartridges in an up-flow configuration reduces total headloss, making it a great alternative when minimal drop is available, while making the most efficient use possible of the media surface area. The cartridge media-release feature dumps spent media directly into the sedimentation basin, allowing for removal of media and accumulated pollutants in one operation.

The VortFilter is available in round concrete structures or precast vaults, and uses Perlite, Zeolite, or GAC media.



How does it work?

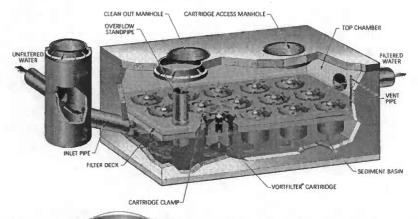
Stormwater enters the sedimentation basin, below the filter deck, through the inlet pipe. Floating pollutants (debris; oil and grease) rise to the filter deck where they are trapped by the cartridge hoods above the cartridge bottom. A significant portion of the total suspended solids settles to the bottom of the basin through gravity separation.

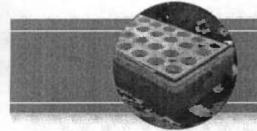
Pretreated stormwater enters the cartridges and passes through the filter media where fine particulate material is captured. Treated water is then discharged through the cartridge onto the top of the filter deck where it exits through the outlet pipe.

Flows exceeding the water quality design flow of the VortFilter will discharge through the stand pipe that extends through the filter basin deck. The stand pipe is sized so the entire water quality flow rate is treated, and the peak flow rate can pass through the VortFilter without restriction.

VortFilter

- · Unique, radial up-flow cartridges
- Ideal for installations where the StormFilter is not an option due to limited available head
- Provides pretreatment and sediment storage in one basin, in many cases eliminating the need for a second structure





Vault VortFilter

- · Fits sites with low headloss
- Sedimentation basin provides pretreatment and sediment storage, extending maintenance intervals
- Media release feature simplifies cleaning

Manhole VortFilter

- · Fits tight sites with low headloss
- Sedimentation basin provides pretreatment and sediment storage, increasing maintenance intervals
- · Media release feature simplifies cleaning

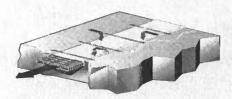
Available models

From small, pre-fabricated catch basins to large box culverts and panel vaults, CONTECH Stormwater Solutions filtration products maximize your land use. The compact design also reduces construction and installation costs by limiting excavation.

Use this table to identify the appropriate model for your site. Our Technical Sales department is available to assist with your project.

StormFilter	Regulation Type	Effective Dr		Inlet Type	Internal Overflow	Treat Capa cfs	
Vault/Manhole							
Treats small to medium sized sites. Arrives on-site fully assembled. The contractor places the unit, lid, and risers, and then connects the inlet and outlet.	Flow	2.3	700	Conveyed Flow Pipe(s)	Online or Offline	1.17	33.1
High Flow							
Treats flows from large sites. The structure consists of large, precast components designed for easy assembly on-site. For very large projects, the High Flow StormFilter can be cast-in-place.	Flow	2.3	700	Conveyed Flow Pipe(s)	Online or Offline	6.0+	170
CatchBasin							
Provides a low cost, low drop, point-of-entry configuration that treats sheet flow from small sites where the structure can be placed in the roadway. Uses the drop from the inlet grate to the conveyance pipe to drive the passive filtration cartridges.	Flow	2.3 (from rim)	700	Sheet Flow Inlet Grate and/ or Pipe	Offline	0.13	3.7
Curb-Inlet							
Provides a low drop, point-of-entry configuration that allows Curb-Inlet opening three to ten feet long. Uses the drop from the Curb-Inlet to the conveyance pipe to drive the passive filtration cartridges.	Flow	2.3 (from rim)	700	Gutter Flow Curb-Inlet and/ or Pipe	Offline	0.67	14.1
Volume							
Meets volume-based stormwater treatment regulations by capturing and treating site-specific Water Quality Volume (WQv). StormFilter cartridges provide treatment and control the discharge rate of the WQv. In addition, the Volume StormFilter can be designed to capture all, or a portion, of the WQv.	Volume	2.3	700	Conveyed Flow Pipe(s)	Online or Offline	W	Qv
VortFilter	Regulation Type	Effective Dr		Inlet Type	Internal Overflow	Treat Capa cfs	ment acity //s
Manhole			7				
ldeal for tight sites with low headloss. Models available to accommodate 1 to 8 cartridges, in diameters of 4 to 8 feet.	Flow	Depend cartridge		Conveyed Flow Pipe(s)	Online	0.36	10.2
Vault							
Large low headloss filtration system. Sedimentation basin provides storage for high sediment load and longer intervals between maintenance. Models available to accommodate from 11 to 34 cartridges, in sizes from 6x12 feet to 12x18 feet.	Flow	Depend cartridge		Conveyed Flow Pipe(s)	Online or Offline	1.50	42.5

StormFilter Accessories



Drain-Down -

- Provides complete dewatering of the StormFilter vault by gradually removing residual water in the sump after the storm event
- · Aids in vector control by eliminating mosquito-breeding habitat
- · Eliminates putrefaction and leaching of collected pollutants
- Lowers maintenance cost by reducing decanting and disposal volume



Sorbent Hood Cover -

- Adsorbs free surface oil and grease on contact
- · Will not release captured oil, even when saturated
- · Made from recycled synthetic fiber

Support & Maintenance

Our goal: to remove stormwater pollutants

- Drawings and specifications are available at contechstormwater.com.
- Design support is available from our Technical Sales engineers, to provide site-specific solutions.
- Full maintenance services are available to maximize performance and ensure long-term product viability.



Filtration

Filtration Hydrodynamic Separation

Screening

Oil/Water Separation

Flow Control

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contechstormwater.com

1/2 Corp

Collinson, Oliff Associates, Inc.

Surveyors ~ Engineers ~ Land Planners 288 Merrimac Court

Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: LOCATION: Sol. Harbour Dowell Rd Area 1

JOB #:

1-8667

RE-DEVELOPMENT

STEP 1:

Estimate parameters.

		Pre - Dev.		Pos	st - Dev.
A (Total area)	=	34.94	acres	34.94	acres
la: Bldg.	=	0.24	acres	7.28	acres
Pave	=	0.73	acres	4.78	acres
Alleys	=	0.00	acres	1.57	acres
Conc.	=	3.05	acres	0.00	acres
Sidewlk	=	0.00	acres	2.22	acres
Gravel	=	1.30	acres	0.00	acres
<u>Drives</u>	=	0.00	acres	2.02	acres
Total	=	5.32	acres	17.87	acres
!= (la Tot / A)	=	15%		51%	
Rv=0.05+0.009*!	=	0.19		0.51	
C:	=	0.3	s mg/l	0.3	mg/l

STEP 2: Calculate the pre-development load (L pre).

 $[(Rv \times C \times A \times 8.16)]$

16.3 lbs./year

STEP 3: Calculate the post-development load (L post).

L post [(Rv x C x A x 8.16)]

43.6 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

L post - (0.8 * L pre)

30.6 lbs.

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED BMP OPTION	REMOVAL EFFICIENCY %	SERIES DEVICE EFFICIENCY 50%	FRACTION D. A. SERVED	x	L post (STEP 3)	=	LOAD REMOVE lbs.		RR Balance Ibs.	
Multi Pond	65%	X	100.0%	Х	43.6	=	28.3	lbs.	2.3	lbs.
Storm Filter	50%	25%	20.3%	Х	43.6	=	2.2	lbs.	0.0	lbs.
		X		Х	,	=		lbs.	0.0	lbs.
		X		X		=		lbs.	0.0	lbs.
		X		X		=		lbs.	0.0	lbs.
		x		X		=		lbs.	0.0	lbs.

65% × 79.7% × 43.6 = 22.67 SF + (50%)(20.3)(43.6) = 4.4 +P (50)(5)(65)(39.2) 1.3

Surveyors ~ Engineers ~ Land Planners 288 Merrimac Court

Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: LOCATION: Sol. Harbour Dowell Rd

JOB #:

Area 1 1-8667

RE-DEVELOPMENT

STEP 1:

Estimate parameters.

			Pre - Dev.		Pos	st - Dev.
A (Total	area)	=	34.94	acres	34.94	acres
la:	Bldg.	=	0.24	acres	7.28	acres
	Pave	=	0.73	acres	4.78	acres
	Alleys	=	0.00	acres	1.57	acres
	Conc.	=	3.05	acres	0.00	acres
	Sidewlk	=	0.00	acres	2.22	acres
	Gravel	=	1.30	acres	0.00	acres
	Drives	=	0.00	acres	2.02	acres
	Total	=	5.32	acres	17.87	acres
I= (la To	t / A)	=	15%		51%	
Rv=0.05		=	0.19		0.51	
C:		_	0.3	s ma/l	0.3	ma/l

STEP 2: Calculate the pre-development load (L pre).

[(Rv x C x A x 8.16)] L pre

16.3 lbs./year

STEP 3: Calculate the post-development load (L post).

 $[(Rv \times C \times A \times 8.16)]$ L post

43.6 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

L post - (0.8 * L pre)

30.6 lbs.

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED BMP OPTION	REMOVAL EFFICIENCY %	SERIES DEVICE EFFICIENCY 50%	FRACTION D. A. SERVED	x	L post	=	LOAD REMOVE Ibs.	.D	RR Balance lbs.	
Multi Pond	65%	х	100.0%	Х	43.6	=	28.3	lbs.	2.3	lbs.
Storm Filter	50%	25%	20.3%	X	43.6	= 1	2.2	lbs.	0.0	lbs.
		x	57.5	X	-	=		lbs.	0.0	lbs.
		X		X		=		lbs.	0.0	lbs.
		x		Х		=		lbs.	0.0	lbs.
		X		х		=		lbs.	0.0	lbs.

65% × 79.7% × 43.6 = 22.61 SF + (50%)(20.3)(43.6) = 4.4

Offset Requried

Surveyors - Engineers - Land Planners

P.O. Box 2209 Prince Frederick, Maryland 20678

410-535-3101: 301-855-1599: Fax 410-535-3103

Water Quality Volume Computation Sheet

Site:			HAS		
Location:		First	District Calve	rt County MD	
COA Authorization #:			1-8667		
Date:			August 3,	2006	
Designer:			KEU		
For:			CC GRO		
Drainage Area :			#1		
Vater Quality Volume -	WOV	10 % TO 10 10 10 10 10 10 10 10 10 10 10 10 10	3 Vas. 11 5 2 2 2 2 3		
rater Quanty volume -	AACCA				
Drainage Area(A):	34.94	Acres			
Impervious Area (I):	17.87	Acres			
Precipitation (P):	1.00	inches			
	% Imp	pervious cove	r = I/A=	51.14	
Rv =0.05+0.009(I) =	0.51				
		(A o ft) = (D)/E	λυ\/Δ\/42 = I	1.49	
Sites w/ < 15% Ir	mp. cover - WQv	$\frac{(Ac-ft) = (P)(F)}{(Ac-ft) = (P)}$	2)/4)/12 -	0.58	
Oites W/ < 10 /0 11	iip. cover - vvQv	VOV	(Acre-ft) =	1.49	
Drainage Area (A):	34.94	Acres			
Impervious Area (I):	17.87	Acres			
Precipitation (P):	1.00	inches			
% Impervious cove	er (I) = Impervious	Area - Disc F	Roof / D A =	51.14	
Rv =0.05+0.009(I) =	0.51				
	oil Area w/in DA	% of Tot		S	Composite S
Soil	0.00	0%		0.38	0.00
	0.00	0%		0.26	0.00
Soil	0.00	0%	ó	0.13	0.00
Soil	0.00	0% 0%	6	0.13 0.07	0.00 0.00
Soil	0.00 0.00 Total Com	0% 0% nposite Soil S	6 pecific Range	0.13 0.07 Factor	0.00
Soil	0.00	0% 0% nposite Soil S	6 pecific Range	0.13 0.07 Factor	0.00 0.00
Soil Soil	0.00 0.00 Total Com	0% 0% nposite Soil S ne Method (pecific Range Structural Prac	0.13 0.07 Factor	0.00 0.00
Soil Soil Soil Groundwater Recharge	0.00 0.00 Total Com	0% 0% nposite Soil S ne Method ((Rev) = (S)(R	pecific Range Structural Prace (2v)(A)/12 =	0.13 0.07 Factor ctices - Rev)	0.00 0.00
Soil Soil Groundwater Recharge	0.00 0.00 Total Com Percent Volur Volume in Acre-ft	0% 0% nposite Soil S ne Method ((Rev) = (S)(R	pecific Range Structural Prace (2v)(A)/12 =	0.13 0.07 Factor ctices - Rev)	0.00 0.00
Soil Soil Groundwater Recharge	0.00 0.00 Total Com Percent Volum Volume in Acre-ft Percent Area I	0% 0% nposite Soil S ne Method ((Rev) = (S)(R Method (Non-	pecific Range Structural Practiv)(A)/12 = -Structural Practical Pr	0.13 0.07 Factor ctices - Rev)	0.00 0.00

Surveyors - Engineers - Land Planners

P.O. Box 2209 Prince Frederick, Maryland 20678

410-535-3101: 301-855-1599: Fax 410-535-3103

Forebay Computation Sheet

Site:			HAS		
Location:			SOLOMONS		
OA Authorization #:			1-8667		
Date:		-	August 3, 2006		
Designer:			KEU		*
For:			CC GROUP		
Drainage Area :			1		-
ebay WQv vs Depth				80	
Contour	Area	Depth	Volume cf	Cum Vol. Cf	Cum Vol ac-
4.0	6427			100	
		1	7490	7490	
5.0	8553				0.17
		1	11675	19165	
6.0	14796				0.44
Foret	pay sized on 0.1 incl	of runoff from impe	rvious area. 17.87 ac	res impervious	

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410-535-3101: 301-855-1599: Fax 410-535-3103

Site:			HAS							
Location:			SOLOMONS							
COA Authorization #:			1-8667							
Date:		<i>F</i>	August 3, 2006							
Designer:		KEU								
For:			CC GROUP							
Drainage Area:			1							
epth vs Volume Perma	anent Pool A									
Contour	Area	Depth	Volume cf	Cum Vol. Cf	Cum Vol ac-					
1.0	12169									
0.0	14740	11	13440.5	13440.5						
2.0	14712	1	16044	29485	0.31					
3.0	17376		10044	29403	0.68					
		1	18769	48254						
4.0	20162				1.11					
5.0	26831	1	23497	71750	1.65					
0.0	20001	0.5	14475	86225	1.03					
5.5	31067				1.98					
epth vs Volume Perma	inent Pool B									
Contour	Area	Depth	Volume cf	Cum Vol. Cf	Cum Vol ac-					
1.0	9631									
				10620						
2.0	11609	1	10620	10020	0.04					
2.0	11608				0.24					
3.0	11608	1	10620	23291	0.24					
3.0	13734				0.53					
		1	12671 14875	23291 38166						
3.0	13734	1	12671	23291	0.53					
3.0	13734	1	12671 14875	23291 38166	0.53					
3.0	13734	1	12671 14875	23291 38166	0.53					
3.0	13734	1	12671 14875	23291 38166	0.53					

Type.... Master Network Summary

Page 1.01

Name.... Watershed

File.... Q:\LDDR-3\Keith\1-8667HASDOC\DOCS\SWM\Area 1\HASPST1.PPW

MASTER DESIGN STORM SUMMARY

Network Storm Collection: Calvert County

Return Event	Total Depth in	Rainfall Type	RNF ID		
Dev 1	2.8000	Synthetic Curve	TypeII 24hr		
Dev 2	3.4000	Synthetic Curve .	TypeII 24hr		
Dev 10	5.3000	Synthetic Curve	TypeII 24hr		
Dev100	7.6000	Synthetic Curve	TypeII 24hr		

MASTER NETWORK SUMMARY SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID		Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
*OUT 1		JCT	. 1	5.008		12.3300	67.07		
*OUT 1		JCT	2	6.595		12.3200	88.92	•	
*OUT 1		JCT	10	11.820		12.3200	156.54		
*OUT 1		JCT	100	18.328		12.3200	237.23		
POND B	IN	POND	1	5.008		12.2800	72.98		
POND B	IN	POND	2	6.595		12.2800	95.33		
POND B	IN	POND	10	11.820		12.2700	166.63		
POND B	IN	POND	100	18.328		12.2700	252.29		
POND B	OUT	POND	1	5.008		12.3300	67.07	5.50	.373
POND B	OUT	POND	2	6.595		12.3200	88.92	5.59	.460
POND B	OUT	POND	10 .	11.820		12.3200	156.54	5.87	.773
POND B	OUT	POND	100	18.328		12.3200	237.23	6.16	1.165

S/N: 621201F2E1CA PondPack Ver. 9.0029 Collinson, Oliff & Associates Time: 4:01 PM

Date: 9/5/2006

Type.... Master Network Summary

Page 1.02

Name.... Watershed

File.... Q:\LDDR-3\Keith\1-8667HASDOC\DOCS\SWM\Area 1\HASPST1.PPW

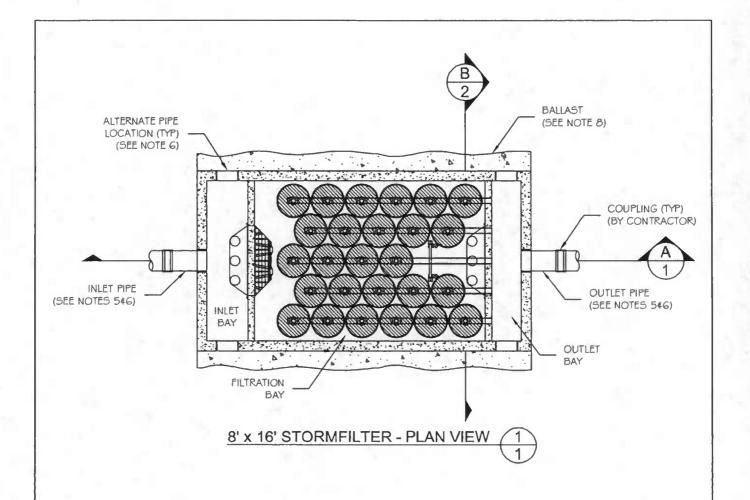
MASTER NETWORK SUMMARY SCS Unit Hydrograph Method

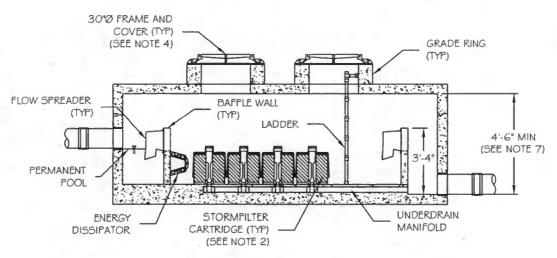
(*Node=Outfall; +Node=Diversion;) (Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

	Node]	ID	Туре	Return Event		Vol -ft	Trun	Opeak hrs	· ·	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
-			 -	 									
	SUB	1	POST	AREA	1	5	.008		12.040	00	72.98		
•	SUB :	1	POST	AREA	2	6	.595		12.040	00	95.33		
	SUB :	1	POST	AREA	10	11	.820		12.030	00	166.63		
	SUB :	1	POST	AREA	100	18	.328		12.030	00	252.29		

S/N: 621201F2E1CA PondPack Ver. 9.0029 Collinson, Oliff & Associates

Time: 4:01 PM Date: 9/5/2006





8' x 16' STORMFILTER - SECTION VIEW



THE STORMWATER MANAGEMENT Stormfilter®

U.S. PATENT No. 5,322,629,
No. 5,707,527, No. 6,027,639
No. 6,649,04∂, No. 5,624,576,
AND OTHER U.S, AND FOREIGN
PATENTS PENDING

©2006 CONTECH Stormwater Solutions



8' x 16' PRECAST STORMFILTER PLAN AND SECTION VIEWS STANDARD DETAIL

1

DRAWING

1/2

DATE: 09/29/05 | SCALE: NONE

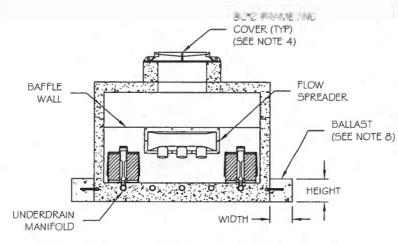
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DRAWN: MJW

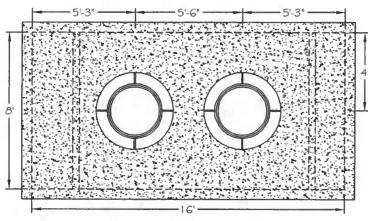
CHECKED: ARG

GENERAL NOTES

- 1) STORMFILTER BY CONTECH STORMWATER SOLUTIONS; PORTLAND, OR (800) 548-4667; SCARBOROUGH, ME (877) 907-8676; ELKRIDGE, MD (866) 740-3318.
- 2) FILTER CARTRIDGE(S) TO BE SIPHON-ACTUATED AND SELF-CLEANING. STANDARD DETAIL DRAWING SHOWS MAXIMUM NUMBER OF CARTRIDGES. ACTUAL NUMBER REQUIRED TO BE SPECIFIED ON SITE PLANS OR IN DATA TABLE BELOW.
- 3) PRECAST VAULT TO BE CONSTRUCTED IN ACCORDANCE WITH ASTM C857 AND C858. DETAIL DRAWING REFLECTS DESIGN INTENT ONLY. ACTUAL DIMENSIONS AND CONFIGURATION OF STRUCTURE WILL BE SHOWN ON PRODUCTION SHOP DRAWING.
- 4) STRUCTURE AND ACCESS COVERS TO MEET AASHTO H-20 LOAD RATING.
- 5) STORMFILTER REQUIRES 2.3 FEET OF DROP FROM INLET TO OUTLET. IF LESS DROP IS AVAILABLE, CONTACT CONTECH STORMWATER SOLUTIONS.
- 6) INLET AND OUTLET PIPING TO BE SPECIFIED BY ENGINEER AND PROVIDED BY CONTRACTOR. PRECAST STORMFILTER VAULT EQUIPPED WITH EITHER CORED OPENINGS OR KNOCKOUTS AT INLET AND OUTLET LOCATIONS.
- 7) PROVIDE MINIMUM CLEARANCE FOR MAINTENANCE ACCESS. IF A SHALLOWER SYSTEM IS REQUIRED, CONTACT CONTECH STORMWATER SOLUTIONS FOR OTHER OPTIONS.
- B) ANTI-FLOTATION BALLAST TO BE SPECIFIED BY ENGINEER AND PROVIDED BY CONTRACTOR, IF REQUIRED. BALLAST TO BE SET ALONG ENTIRE LENGTH OF BOTH SIDES OF THE STRUCTURE.
- 9) ALL STORMFILTERS REQUIRE REGULAR MAINTENANCE. REFER TO OPERATION AND MAINTENANCE GUIDELINES FOR MORE INFORMATION.



8' x 16' STORMFILTER - SECTION VIEW B



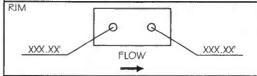
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8' x 16' STORMFILTER - TOP VIEW 1

8' x 16' PRECAST STORMFILTER DATA

0.0141112121401411	
STRUCTURE ID	XXX
WATER QUALITY FLOW RATE (cfs)	X.XX
PEAK FLOW RATE (cfs)	X.XX
RETURN PERIOD OF PEAK FLOW (yrs)	XXX
# OF CARTRIDGES REQUIRED	XX
CARTRIDGE FLOW RATE (15 OR 7.5 gpm)	XX
MEDIA TYPE (CSF, PERLITE, ZPG)	XXXXX

PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE #1	XXX.XX'	XXX	XX"
INLET PIPE #2	XXX.XX ^t	XXX	XX ⁴
OUTLET PIPE	XXX,XXX ¹	XXX	XX*



LADDER		YES/NO
ANTI-FLOTATION BALLAST	WIDTH	HEIGHT
	XX**	XX"
NOTES/SPECIAL REQUIREME	NT5:	

THE STORMWATER MANAGEMENT Stormfilter® U.S. PATENT No. 5,322,629, No. 5,707,527, No. 6,027,639 No. 6,649,048, No. 5,624,576, ANO OTHER U.S. AND FOREIGN PATENTS PENDING

STORMWATER SOLUTIONS.

contechstormwater.com

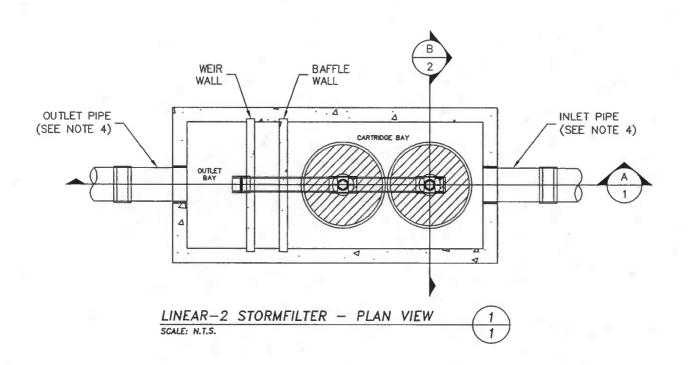
8' x 16' PRECAST STORMFILTER TOP AND SECTION VIEWS, NOTES AND DATA STANDARD DETAIL DRAWING

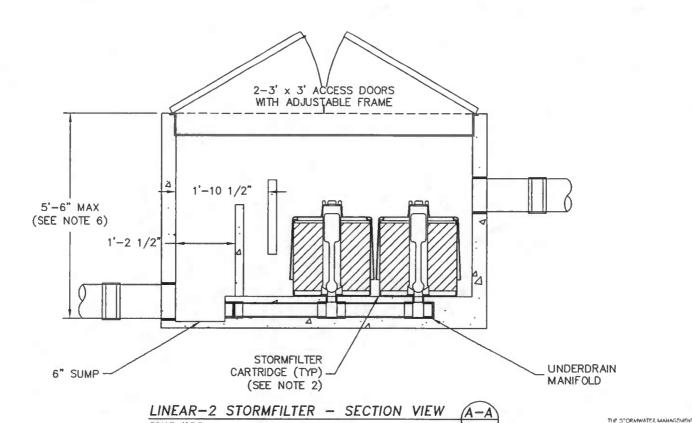
DATE: 09/29/05 | SCALE: NONE

FILE NAME: SF816-PC-DTL

DRAWN: MJW CHECKEO: ARG

2/2





SHEET DATE BY REVISION

LINEAR—2 PRECAST STORMFILTER

PLAN AND SECTION VIEW

STANDARD DRAWING

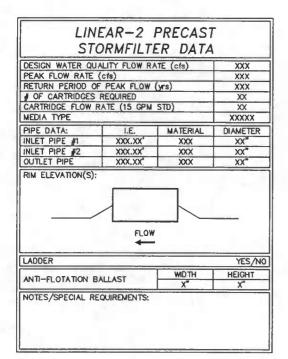
SCALE: N.T.S.

DESIGNED BY: JHL DRAWN BY: JHR

ATE: PROJECT NO.: DRAWING FILE NAME: /22/04 XXXX SFLIN2.DWG

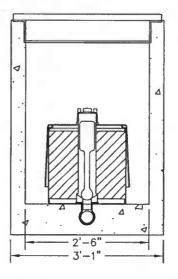
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CONTECH STORMWATER SOLUTIONS CONTECHSTORMWATER CONTECNS CONTECHSTORMWATER CONTECNS CONTECNS



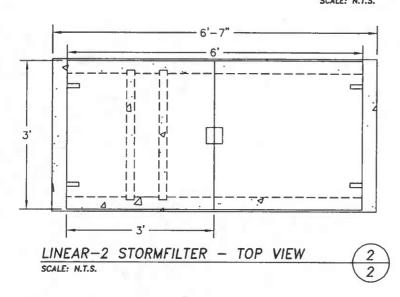
GENERAL NOTES

- STORNFILTER BY CONTECH STORWWATER SOLUTIONS, PORTLAND, OREGON 800/548-4667. FILTERS TO BE SIPHON-ACTUATED AND SELF-CLEANING.
- PRECAST CONCRETE VAULT TO BE CONSTRUCTED IN ACCORDANCE WITH ASTM C857 AND C858.
- 4.) STORMFILTER REQUIRES 2.3' OF DROP FROM INLET TO OUTLET. INLET AND OUTLET PIPING TO BE SPECIFIED BY ENGINEER AND PROVIDED BY CONTRACTOR.
- PRECAST STORMFILTER EQUIPPED WITH EITHER CORED OPENINGS OR KNOCKOUTS AT INLET/OUTLET LOCATION.
- 6.) RECOMMENDED MAXIMUM DEPTH OF VAULT. DEPTH CAN RANGE. FROM 3.5' TO 5.5' RIM TO IE OUT.
- 7.) ANTI-FLOTATION BALLAST TO BE SPECIFIED BY ENGINEER IF NEEDED. BALLAST TO BE SET ALONG ENTIRE LENGTH OF BOTH SIDES OF VAULT. BALLAST MATERIALS TO BE PROVIDED BY CONTRACTOR.
- 8.) ALL STORMFILTERS REQUIRE REGULAR MAINTENANCE. REFER TO OPERATION AND MAINTENANCE GUIDELINES FOR DETAILS.
- 9.) DETAIL REFLECTS DESIGN INTENT ONLY. ACTUAL VAULT DIMENSIONS AND CONFIGURATION WILL BE SHOWN ON PRODUCTION SHOP DRAWING.
- 10.) STANDARD DETAIL SHOWS MAXIMUM NUMBER OF CARTRIDGES. EXACT NUMBER REQUIRED TO BE SPECIFIED ON SITE PLANS.



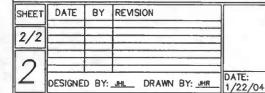
LINEAR-2 STORMFILTER - SECTION VIEW SCALE: N.T.S.





THE STORMWATER MANAGEMENT STORM ROTO U.S. PATENT NO. 5,322,629, NO. 5,707,527, NO. 6,027,639 NO. 6,649,040, NO. 3,624,576, AND OTHER U.S. AND FOREIGN PATENTS FEVENING

©2006 CONTECH Stormwater Solutions



LINEAR-2 PRECAST STORMFILTER DETAILS AND NOTES STANDARD DRAWING

PROJECT NO .: XXXX

DRAWING FILE NAME: SFLIN2.DWG



Collinson Oliff & Associates, Inc.

Surveyors - Engineers - Land Planners 110 Main Street, P.O. Box 2209 Prince Frederick, Maryland 20678 410-535-3101 / 301-855-1599 / Fax 410-535-3103

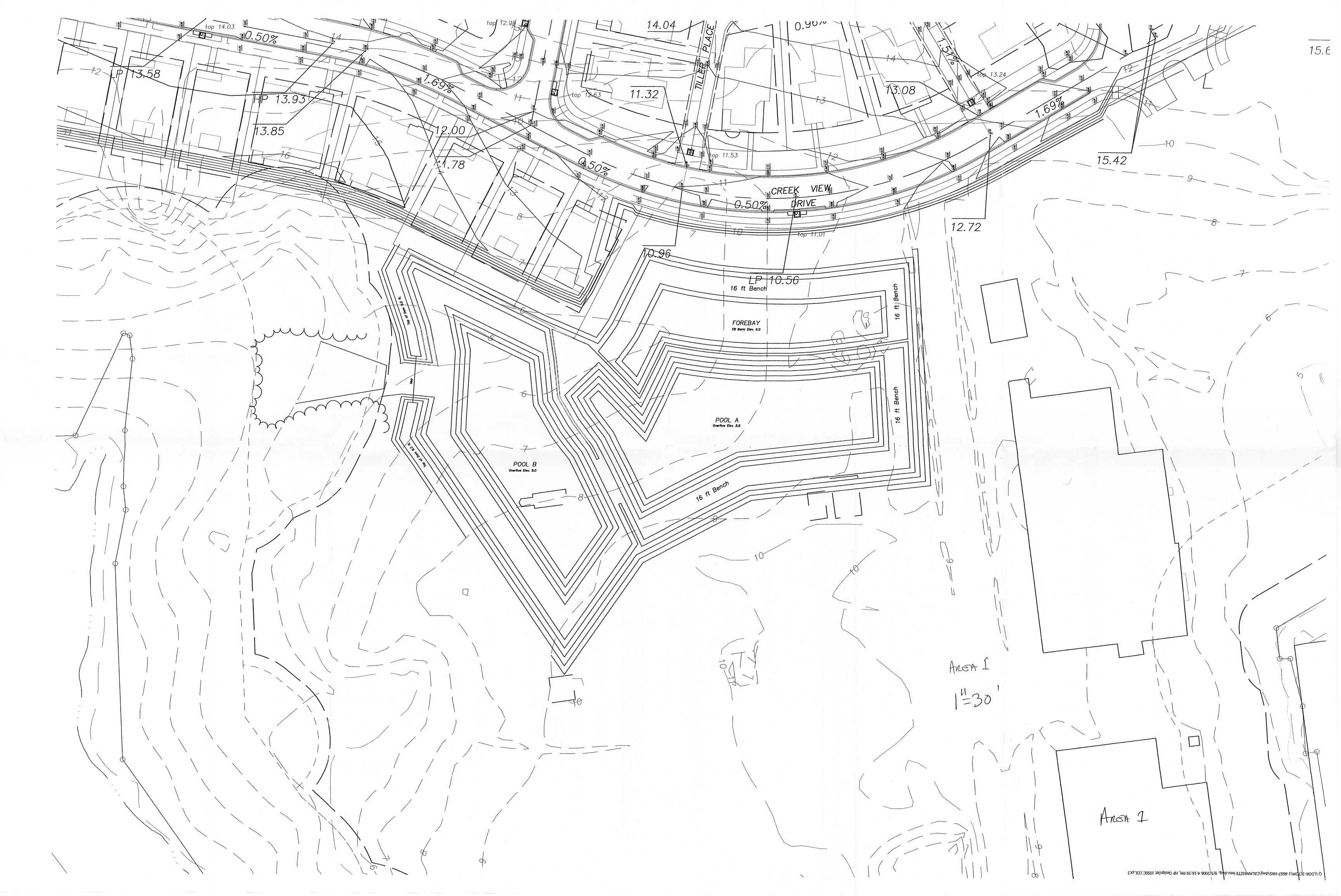
Critical Area Commission Letter of Understanding for The Harbours at Solomons

Stormwater Management

- 1. The site qualitative Stormwater management is to be based on a 20% removal Rate.
- 2. Water Quality (WQv) in Sub Areas 1, 2, 3&4, 5, and 6 are to be provided as follows:
 - 1 Multi Pond primary and Stormfilter or Infiltration secondary.
 - 2 Wet ED Pond primary and Stormfilter or Infiltration secondary.
 - 3&4- Wet ED Pond primary and Stormfilter or Infiltration secondary.
 - 5 Bio Retention.
 - 6 Multi pond.
- 3. All devices are to be structurally designed in accordance with the MDE 2000 SWM Manual.
- 4. The Bio-retention area construction is to be provided by a landscaping contractor not an excavating contractor.
- 5. The rip rap outfalls of the Stormwater devices are to have clusters of over story and under story trees planted in the channel outfalls. The clusters are to be protected with check dams to divert heavy storm discharges around the tree clusters. The clusters are to consist of 1 over story tree and 2 under story trees. The clusters are to equate to 400 sf. The number of clusters required is to equate to the disturbance of the stone outfall channel from the center line of the embankment to the limit of disturbance divided by 400
- 6. All devices are to be planted in accordance with the MDE 2000 SWM Manual and approved by Calvert County DPW and P&Z offices.

Buffer and Landscaping

- 1. A vegetated buffer yard covering no less than 25% of the total area within the Special Buffer Management Area will be provided.
- 2. The total impervious surface area coverage within the Special Buffer Management Area shall be limited to 30% of the area within the buffer.
- 3. In addition to the mitigation and offset requirements for development within the Special Buffer Management Area, vegetative cover equaling 15% of the entire area of the subdivision (66.33 acres X 15% = 9.95 acres) will be provided. The vegetated cover will consist of the portion of the 100' buffer along Mill Creek within the area of the subdivision, plantings within various community areas, plantings along the slopes of the Stormwater Management areas, street trees with under story clusters, and trees with under story clusters planted on individual lots and protected through the HOA documents.
- 4. Existing native vegetation may not be removed from the Special Buffer Management Area except in accordance with an approved Buffer Management Plan designed to enhance the Buffer.



Recommended Criteria for Section 8-1.08.D.4.e.v

- v. Subdivision within IDA Special Buffer Management Areas-Land in a Special Buffer Management Area may be subdivided and retain its status if it meets all of the following criteria:
 - 1. Any development activity, including structures, roads and parking areas must be set back a minimum of 50 feet from tidal waters, tidal wetlands, or tributary streams, except in the Solomons Town Center, where the minimum setback is 30 feet. Accessory structures may be permitted within the Buffer, but not within the minimum 50-foot setback.
 - 2. Community sewer must serve the property.

Note: Numbers 3-10 below provide examples of criteria, taken from various jurisdictions within the Critical Area, that may be included within Section 8-108.D.4.e.v of the County's ordinance in order to assure that future development within the Special Buffer Management Areas is consistent with all of the goals outlined within COMAR for redevelopment in a BEA. While there may be alternatives or acceptable variations of these standards, those selected must be sufficiently comprehensive to ensure that redevelopment and/or subdivision of an existing BEA will result in an overall improvement to the Buffer and achieve the goals outlined in COMAR.

- 3. The development activity within the Special Buffer Modification Area shall minimize impact to the Buffer.
- 4. A vegetated bufferyard shall cover no less than 25% of the total area within the Special Buffer Management Area, but vegetated areas less than 10 feet wide may not be counted toward the 25% Buffer. The vegetated bufferyard may vary in width.
- 5. Total impervious surface area coverage within the Special Buffer Management Area shall be limited to 30% of the area within the Buffer.
- 6. In addition to the mitigation and offset requirements for development within the Special Buffer Management Area, the redevelopment provides vegetative cover on the entire lot or parcel which equals and/or exceeds 15% of the total acreage of the lot or parcel.
- 7. Existing native vegetation may not be removed from the Special Buffer Management Area except in accordance with an approved Buffer Management Plan designed to enhance the Buffer.
- 8. All stormwater management treatment shall be provided by facilities that provide habitat as well as stormwater benefits such as stormwater management ponds (P1-P5), stormwater wetlands (W1-W4) or bioretention.
- 9. Stormwater runoff shall be managed to provide an overall reduction in pollutant loadings such that a 20% improvement to water quality is achieved.
- 10. The redevelopment shall be designed so that all stormwater quality and quantity management is accomplished on the project site.

^{**} Blue font indicates proposed County language.

Exhibit A

Recommended Criteria for Section 8-1.08.D.4.e.v

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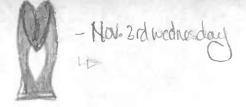
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Och energy

^{**} Blue font indicates proposed County language.

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SWM - Added October 11, 2006

1. In addition to the Stormwater Management Criteria originally outlined the following offset is to be provided. In Sub Area 1 the 2.3 lbs of offset required, plus in Sub Area 2 the 0.8 lbs of offset required, plus in Sub Area 3/4 the 2.3 lbs of offset required, for a total of 5.4 lbs of offset required is to be provided by the construction of a bio-retention device at the Washburn Boatyard Site and the removal of 1.43 acres of impervious area on the Calvert Marina Property outside of the proposed subdivision limits.

CIRCLE At time colland



head's to speary

Buffer and Landscaping

1. A vegetated buffer yard covering no less than 25% of the total area within the Special Buffer Management Area will be provided.

2. The total impervious surface area coverage within the Special Buffer Management Area shall be limited to 30% of the area within the buffer.

4. Existing native vegetation may not be removed from the Special Buffer Management Area except in accordance with an approved Buffer Management Plan designed to enhance the Buffer.

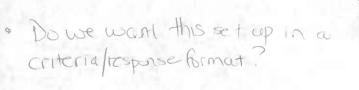
Collinson Oliff & Associates, Inc.

Surveyors - Engineers - Land Planners 110 Main Street, P.O. Box 2209 Prince Frederick, Maryland 20678 410-535-3101 / 301-855-1599 / Fax 410-535-3103

Critical Area Commission Letter of Understanding for The Harbours at Solomons

Stormwater Management

- # 9 1. The site qualitative Stormwater management is to be based on a 20% removal Rate.
 - 2. Water Quality (WQv) in Sub Areas 1, 2, 3&4, 5, and 6 are to be provided as follows:
 - 1 Multi Pond plus offsite offset.
 - 2 Wet ED Pond plus offsite offset.
 - 3&4- Wet ED Pond plus offsite offset.
 - 5 Bio Retention.
 - 6 Multi pond.
 - All devices are to be structurally designed in accordance with the MDE 2000 SWM Manual.
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 - All devices are to be planted in accordance with the MDE 2000 SWM Manual and approved by Calvert County DPW and P&Z offices.





HAS 1-8667 September 21, 2006 Revised October 11, 2006 Revised October 23, 2006

Directions to

Adkins Arboretum 12610 Eveland Road Ridgely, Maryland 410-634-2847 www.AdkinsArboretum.org

Directions from the Chesapeake Bay Bridge (30 minutes)

Take US 50 to US 404. Turn left onto US 404 and go approximately 7 miles to the second stoplight at MD 480. Turn left onto MD 480 and then take the immediate first left onto Eveland Road. The Arboretum is 2 miles ahead on the left.

Directions from Wilmington/Philadelphia (11/2 - 2 hours)

Take the US 896 South exit off of I-95. US 896 will become US 301. Continue on US 301 to Centreville and turn left onto MD 304 to Ruthsburg and turn right onto MD 481. Go two miles and take the first left onto Crouse Mill Road, which will take you to Crouse Mill Pond. Continue on Crouse Mill Road to Eveland Road, the first road on your right after the pond. Turn right onto Eveland Road. The Arboretum is ¼ mile ahead on your right.

Directions from Centreville, MD (20 minutes)

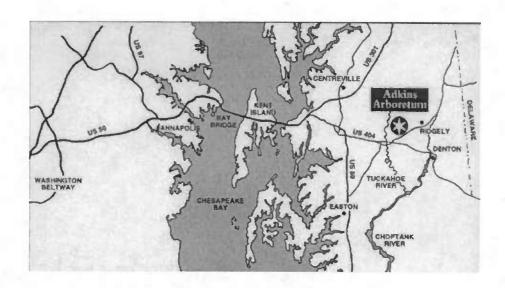
Take MD 304 across US 301. Continue on MD 304 to Ruthsburg and turn right onto MD 481. Go two miles and take the first left onto Crouse Mill Road, which will take you to Crouse Mill Pond. Continue on Crouse Mill Road to Eveland Road, the first road on your right after the pond. Turn right onto Eveland Road. The Arboretum is ¼ mile ahead on your right.

Directions from Easton, MD (25 minutes)

From North of Easton on US 50 take Cordova Road (MD 309) to MD 404. Turn right onto MD 404 and go to the first stoplight at MD 480. Turn left onto MD 480 and take the immediate first left onto Eveland Road. The Arboretum is 2 miles ahead on the left.

Directions from the East

From Route 13 take US 404 West. Turn right onto MD 480 and take the immediate first left onto Eveland Road. The Arboretum is 2 miles ahead on the left.



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CRITICAL AREA COMMISSION FOR THE CHESAPEAKE AND ATLANTIC COASTAL BAYS 1804 WEST STREET, SUITE 100 ANNAPOLIS, MD 21401

PROJECT NOTIFICATION APPLICATION

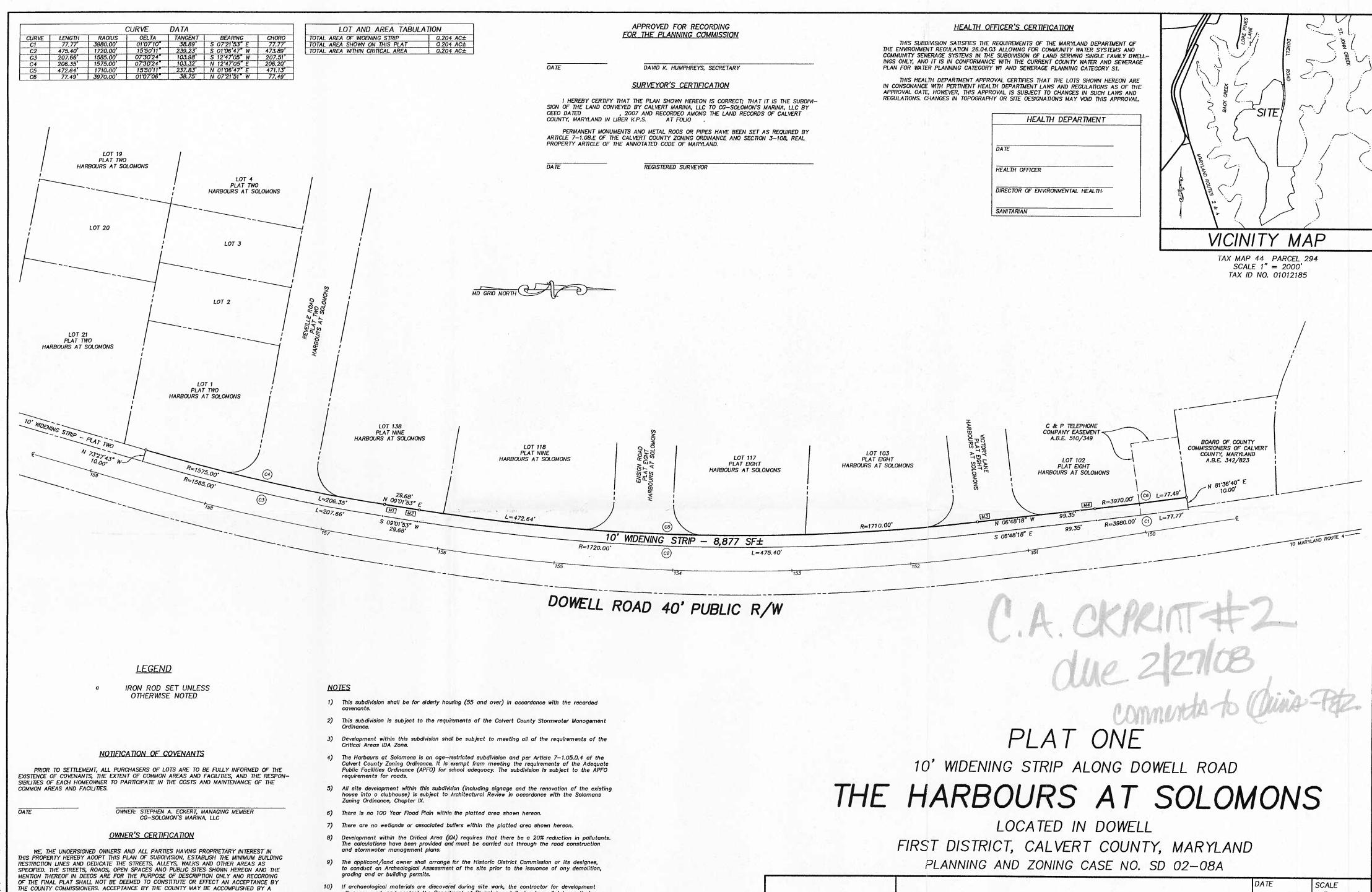
GENERAL PROJECT INFORMATION

		Calvert C			Date: 8.2.07 FOR RESUBMITTAL ONLY
Гах Мар#	Parcel #	Block #	Lot#	Section	Corrections
44	294				Redesign
					No Change
					Non-Critical Area
770					*Complete Only Day 1
Tax ID: O	1 012185	1			*Complete Only Page 1 General Project Information
		·			General Project information
Project Name	(site name, su	bdivision name	e, or other)	The Horb	ours at Solomons
					46.
Project locati	on/Address	14415 D	owell A	Road	
74 0				·	
City Don	1211				Zip 20629
0001 0000 711		45 664			-1. 3.4.34
ocal case nu	mber SD	02-08A			
\ nnlicont:	Y and many 1				
Applicant:	Last name				First name
7	20.0				
Company 6	C Group	LLC			
	T				
A 10 40 F	Type (check al	il that apply):			TO TO TO THE THE
Application '					RECEIVE
	-:+			Variance	
Building Pern		H		D .	
Building Pern Buffer Manag	gement Plan			Rezoning	ALIC 2 9 2007
Building Pern Buffer Manag Conditional U	gement Plan Jse			Site Plan	AUG 2 8 2007
Building Pern Buffer Manag Conditional U Consistency F	gement Plan Jse Report			Site Plan Special Exception	
Building Pern Buffer Manag Conditional U Consistency F Disturbance >	gement Plan Jse Report 5,000 sq ft			Site Plan Special Exception Subdivision	
Building Pern Buffer Manag Conditional U Consistency F Disturbance >	gement Plan Jse Report 5,000 sq ft			Site Plan Special Exception	CRITICAL AREA COMMISSI
Building Pern Buffer Manag Conditional U Consistency F Disturbance > Grading Perm	gement Plan Use Report 5,000 sq ft it			Site Plan Special Exception Subdivision	CRITICAL AREA COMMISSI
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Building Perm Buffer Manag Conditional U Consistency F Disturbance > Grading Perm Local Jurisdi	gement Plan Use Report 5,000 sq ft iit iction Contact	Information:		Site Plan Special Exception Subdivision Other	CRITICAL AREA COMMISSI Chesupeake & Atlantic Coastal
Building Perm Buffer Manag Conditional U Consistency F Disturbance > Grading Perm Local Jurisdi	gement Plan Use Report 5,000 sq ft it	Information:		Site Plan Special Exception Subdivision Other	CRITICAL AREA COMMISSI
Building Perm Buffer Manag Conditional U Consistency F Disturbance > Brading Perm Cocal Jurisdi Last name	gement Plan Use Report 5,000 sq ft iit iction Contact			Site Plan Special Exception Subdivision Other First name	CRITICAL AREA COMMISSI Chesapeake & Atlantic Coastal
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Last name _ Phone #	gement Plan Use Report 5,000 sq ft iit iction Contact	· 2348		Site Plan Special Exception Subdivision Other First name	CRITICAL AREA COMMISS Chesapeake & Atlantic Coastal

SPECIFIC PROJECT INFORMATION

Describe Proposed use	of project si	ite:	**			
Single family	detaci	hed	residentia	I subdivision		
	Yes					
Intra-Family Transfer				G	Yes	
Grandfathered Lot	H			Growth Allocation		
Orangia Horoda 1700				Buffer Exemption A	rea 🗵	
Project Type (check a	ll that appl	y)		and a later of the later	No. of the	
Commercial				Recreational		
Consistency Report	Ħ				- VC	
Industrial	H			Redevelopment		
Institutional	H			Residential		
Mixed Use	H			Shore Erosion Contro		
Other	님			Water-Dependent Fac	cility 🔲	
Juner	Ш			13.5	18: 15	
SITE INVENTORY (1			are feet)		Acres	Sq Ft
DA Area	46.33		Sqrt	Total Disturbed Area	64.1	
DA Area						
RCA Area						
otal Area	66.3	3		# of Lots Created	251	
Existing Forest/Woodland		Acres		Existing Impervious Surface	Acres	Sq Ft
created Forest/Woodland				New Impervious Surface		
emoved Forest/Woodlan				Removed Impervious Surface		
				Total Impervious Surface	1.0 2/0	
				Tour importious buriace		
VARIANCE INFORM	ATION (C	heck a				
uffer Disturbance		Acres	Sq Ft	Buffer Forest Clearing	Acres	Sq Ft
on-Buffer Disturbance				Mitigation	-	•
Variance Type					1	
Buffer \[\begin{array}{c} \text{Variance Type} \\ \text{P} \\ \text{Variance Type} \\ Variance	1		Α	Structure		
	THURSDAY C			cc. Structure Addition		
orest Clearing			Ba			
PA Impact	1		De	eck		
npervious Surface			Dy	velling		
xpanded Buffer			Dy	velling Addition		
ontidal Wetlands	30.0	CON TO		rage		
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teep Slopes	i		Pa			
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			Sh			
No. of the Control of			Ot.	her		

T:\Forms\P&Z\2007SubdivisionForms\CriticalAreaTransmittalForm.doc Revised by C.A.C. 12/14/2006



COORDINATES

 NO.
 NORTH
 EAST

 M1
 244307.08
 1469171.66

 M2
 244336.40
 1469176.32

 M3
 244807.44
 1469185.47

 M4
 244906.09
 1469173.70

SUBSEQUENT APPROPRIATE ACT.

AND THE SETTING OF MARKERS, HAVE BEEN MET.

WITNESS

A UTILITY EASEMENT IS ESTABLISHED TEN FEET IN WIDTH, BINOING ON ALL RIGHT-OF-WAYS FOR THE INSTALLATION AND MAINTENANCE OF PUBLIC UTILITIES. ALL UTILITIES INCLUDING

GAS, ELECTRIC AND COMMUNICATION SHALL BE INSTALLED UNDERGROUND IN ACCORDANCE WITH THE PUBLIC SERVICE COMMISSION ORDER NO. 60316. THE TELEPHONE COMPANY MAY

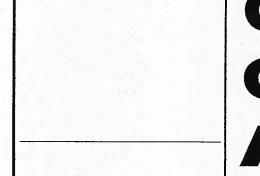
REQUIRE A PRE-CONSTRUCTION REFUNOABLE OEPOSIT IN ACCORDANCE WITH PARAGRAPH 7

WE HEREBY CERTIFY THAT TO THE BEST OF OUR KNOWLEDGE, THE REQUIREMENTS OF SECTION 3-108, REAL PROPERTY ARTICLE OF THE ANNOTATED CODE OF MARYLANO, 1974

EDITION, AS CURRENTLY AMENDEO, AS FAR AS THEY RELATE TO THE MAKING OF THIS PLAT

OWNER: STEPHEN A. ECKERT. CG-SOLOMON'S MARINA, I.I.C. 8120 WOODMONT AVE., SUITE 300 BETHESDA, MO 20814

- If archaeological materials ore discovered during site wark, the controctor for development will cease work and contact the Department of Planning and Zoning immediately sa that remains/findings may be evaluated and the information recarded in the interest of dacumenting the heritage of Calvert County prior to restarting work.
- The developer is responsible for canstruction of all required site omenities including, but not necessarily limited to, sidewolks, blke paths, pothwoys, street trees, street lighting, recreotion— al facilities (including the community center), as well as oil required londscoping. The hame owners/property awners association shall be responsible far the maintenance of the amenities. An Improvement Plon and bond estimate for the required amenities is on file of the Deport ment of Planning and Zoning. Bonding for the required omenities shall be posted with the Public Works Agreement.
- 12) A perpetual easement is provided for the widening, future widening and/ar construction and maintenance of the area adjacent to the right—of—way lines of the public raadways shown herein in accordance with the Calvert County Road Ordinance and Oesign Standards as cur mended ond in effect at the time of opprovol for recordation of this plat. This easement sholl include oil storm droinoge structures and appurtenonces, excovation ond construc-tion of driveway entrances ond appraach raads, street intersections, gutters, swoles, ditches, berm ditches, flumes and ony other construction opplicable ta said widening, all as shown on



DATE

110 MAIN STREET

JOB NO. DRAWN BY 1 - 8667FLDR/REF. THE HARBOURS AT/SOLOMONS APPROVED USO DATE REVISION FEB | 4 2008

1" = 50'

JULY 2007

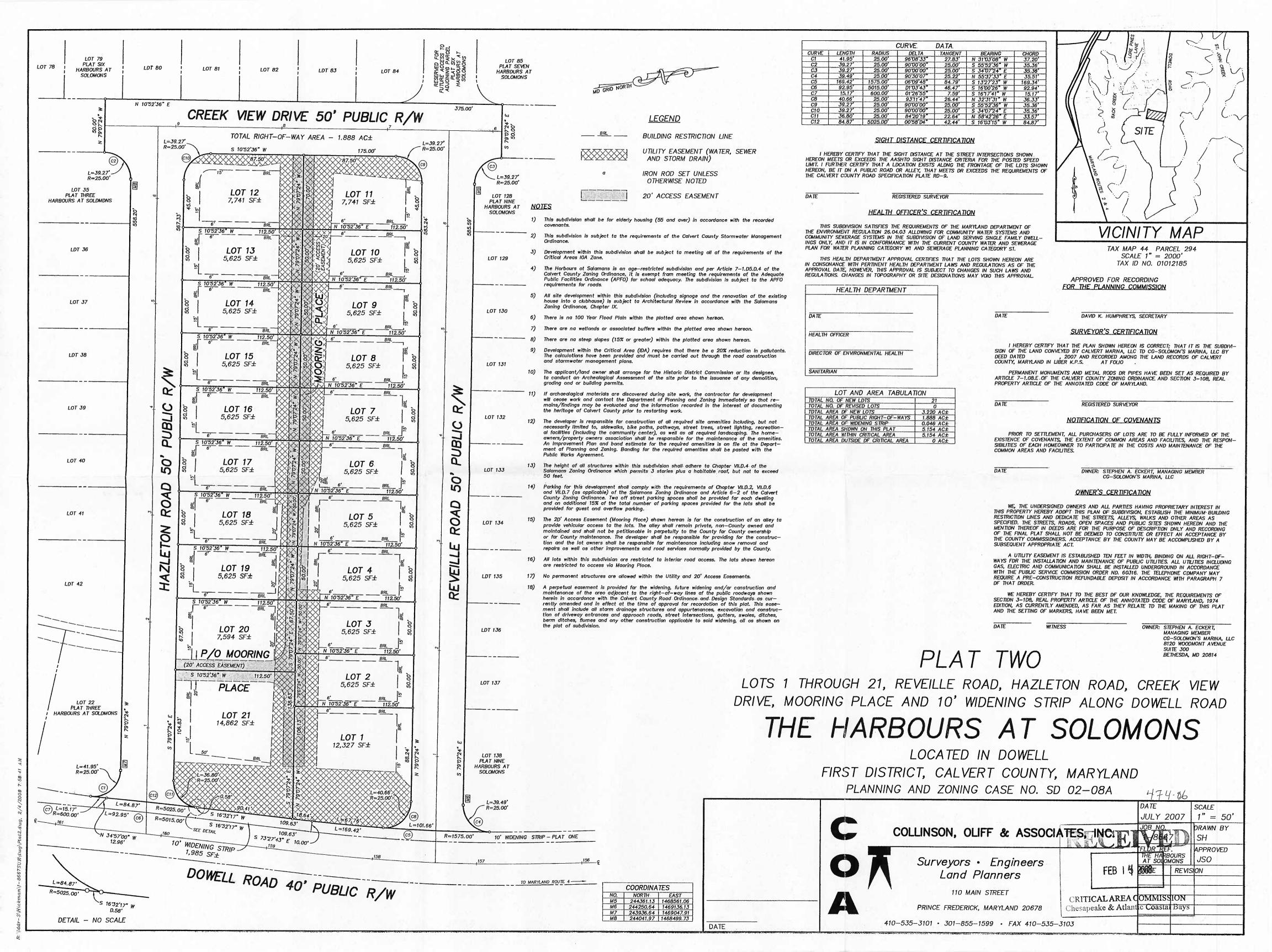
PRINCE FREDERICK, MARYLAND 20678

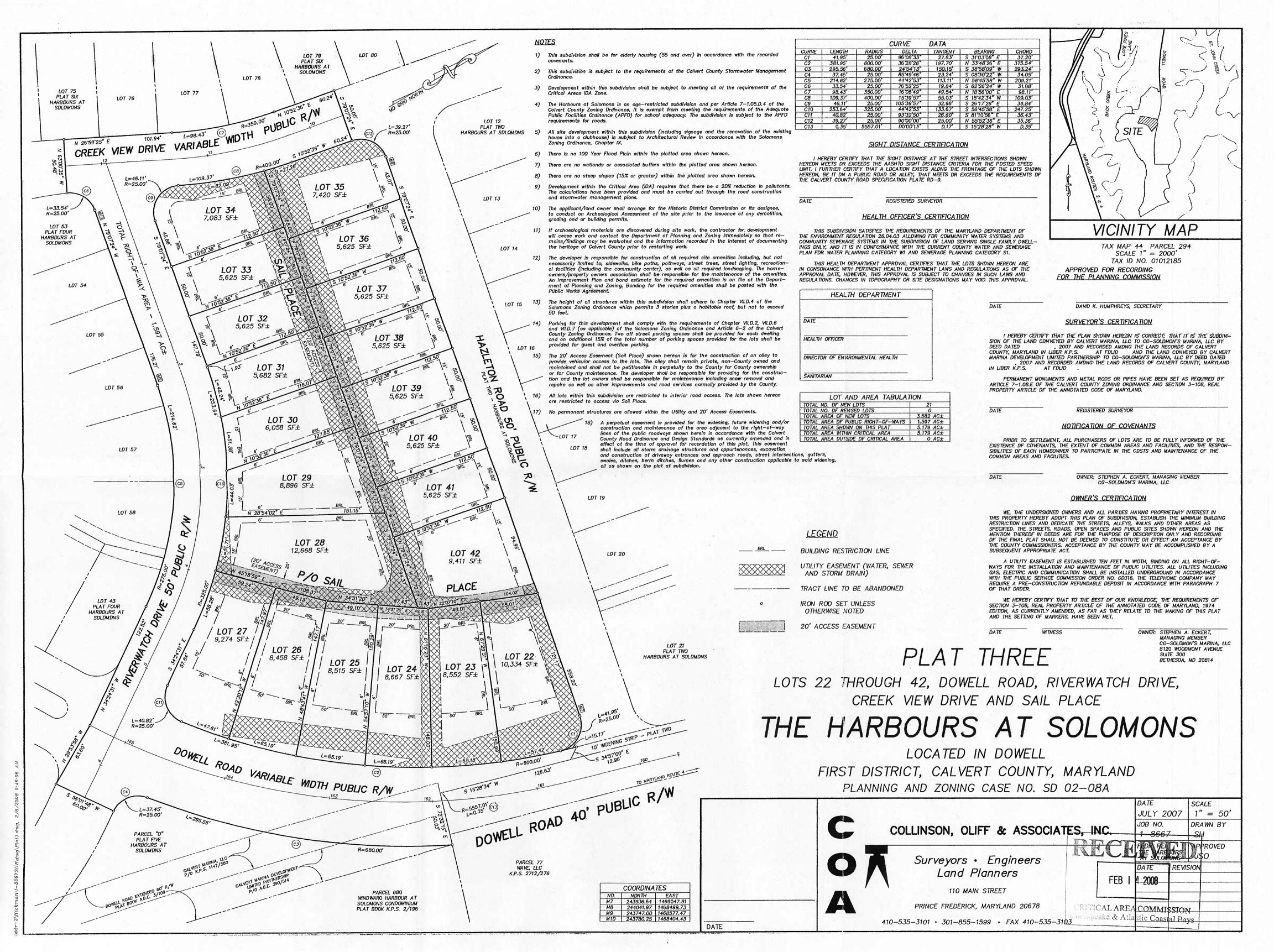
RITICAL AREA COMMISSION

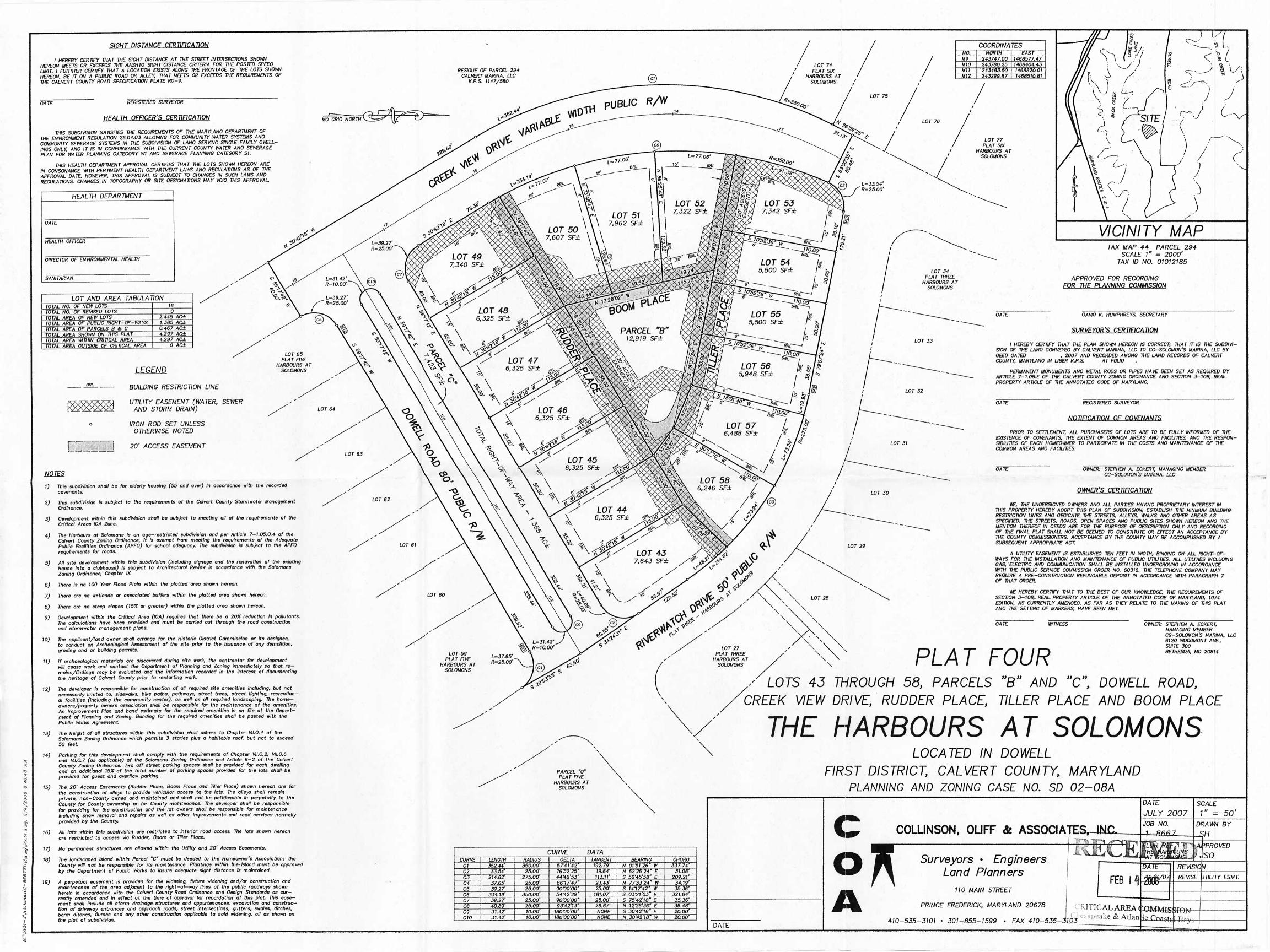
COLLINSON, OLIFF & ASSOCIATES, INC.

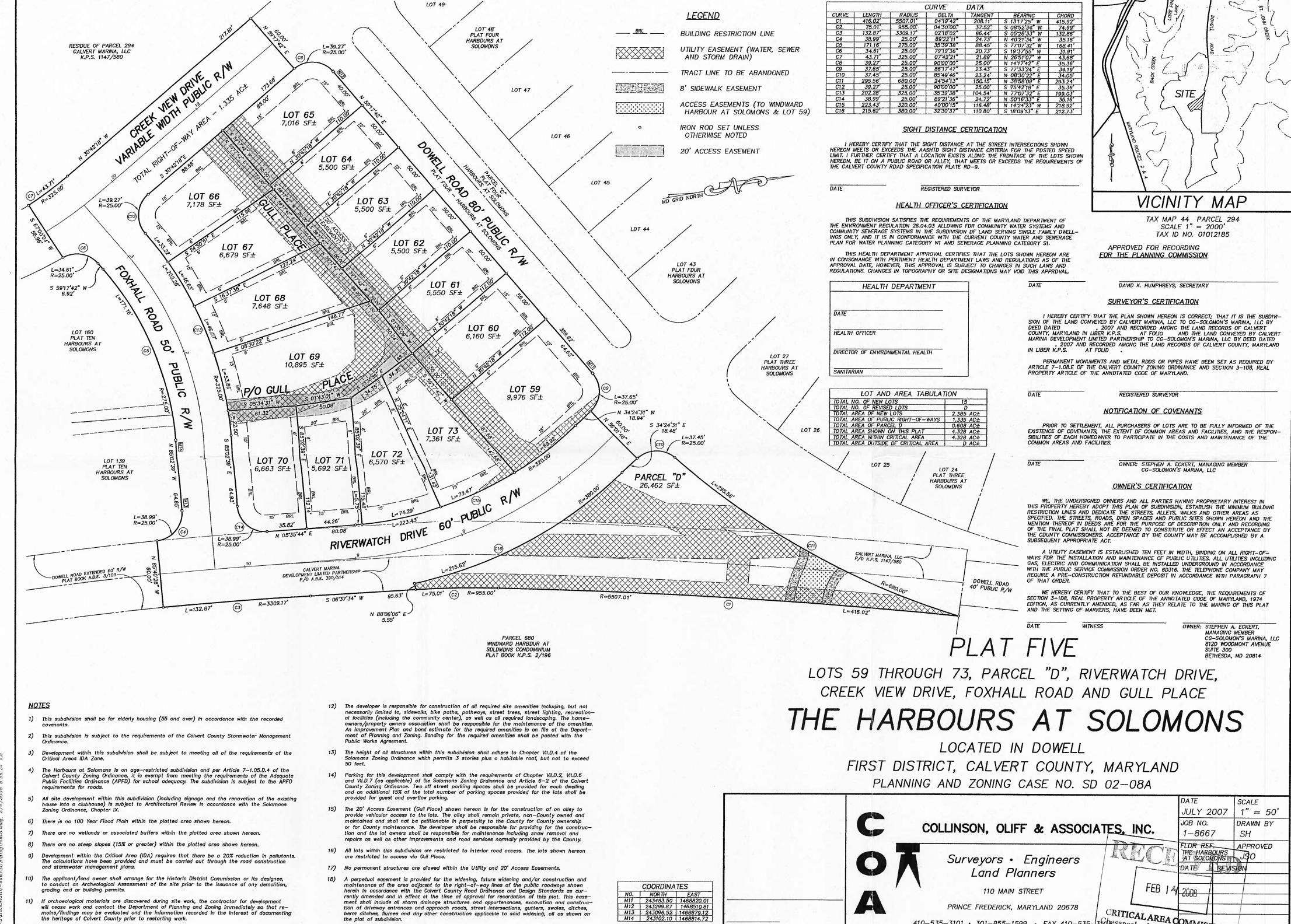
Surveyors • Engineers Land Planners

410-535-3101 · 301-855-1599 · FAX 410-535-3103 nesapeake & Atlantic Coastal Bays









DATE

PRINCE FREDERICK, MARYLAND 20678

410-535-3101 · 301-855-1599 · FAX 410-535-3103 sapeake & Atlantic Coastal Bays

CRITICAL AREA COMMISSION

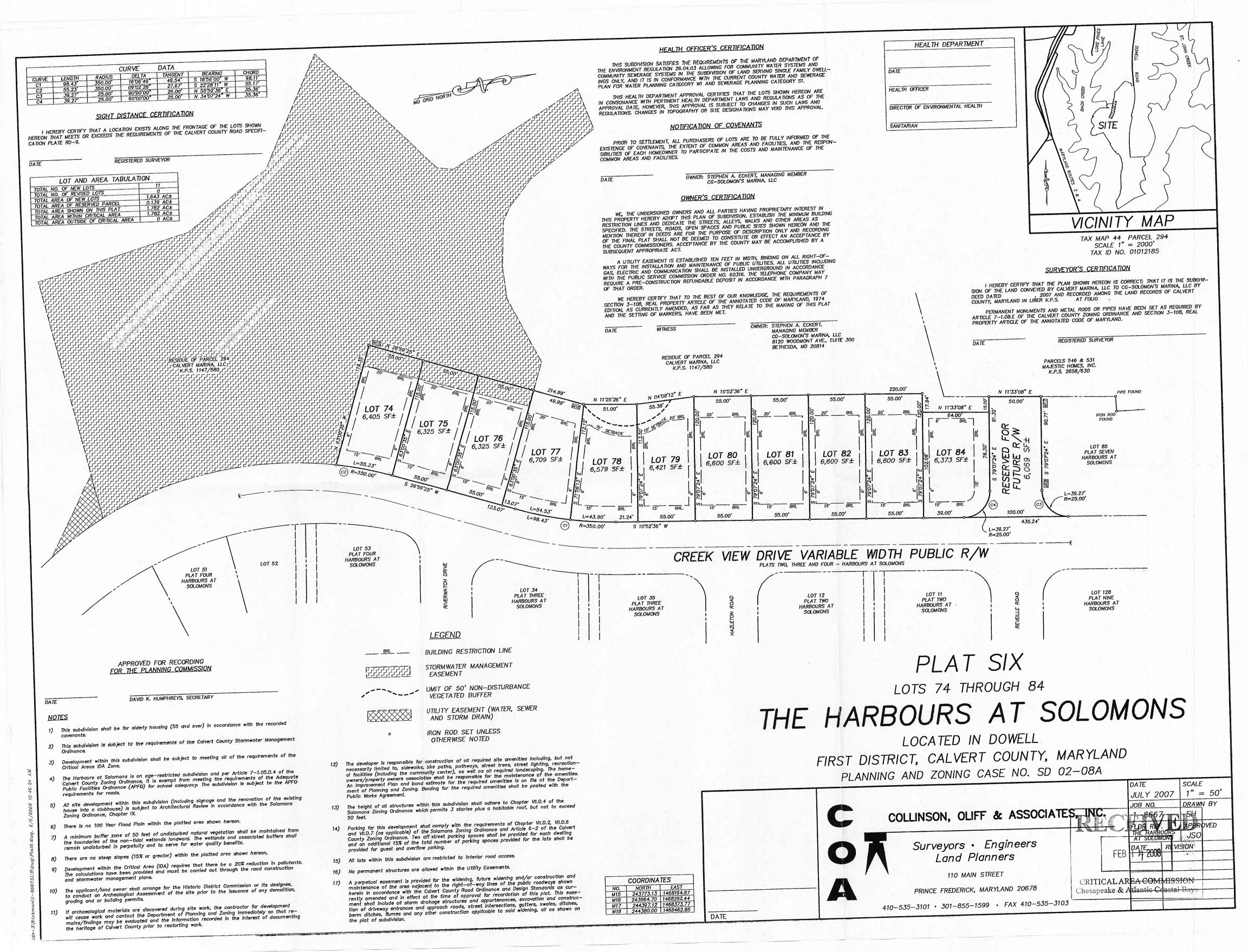
ment shall include all storm drainage structures and oppurtenances, excovation and construc-

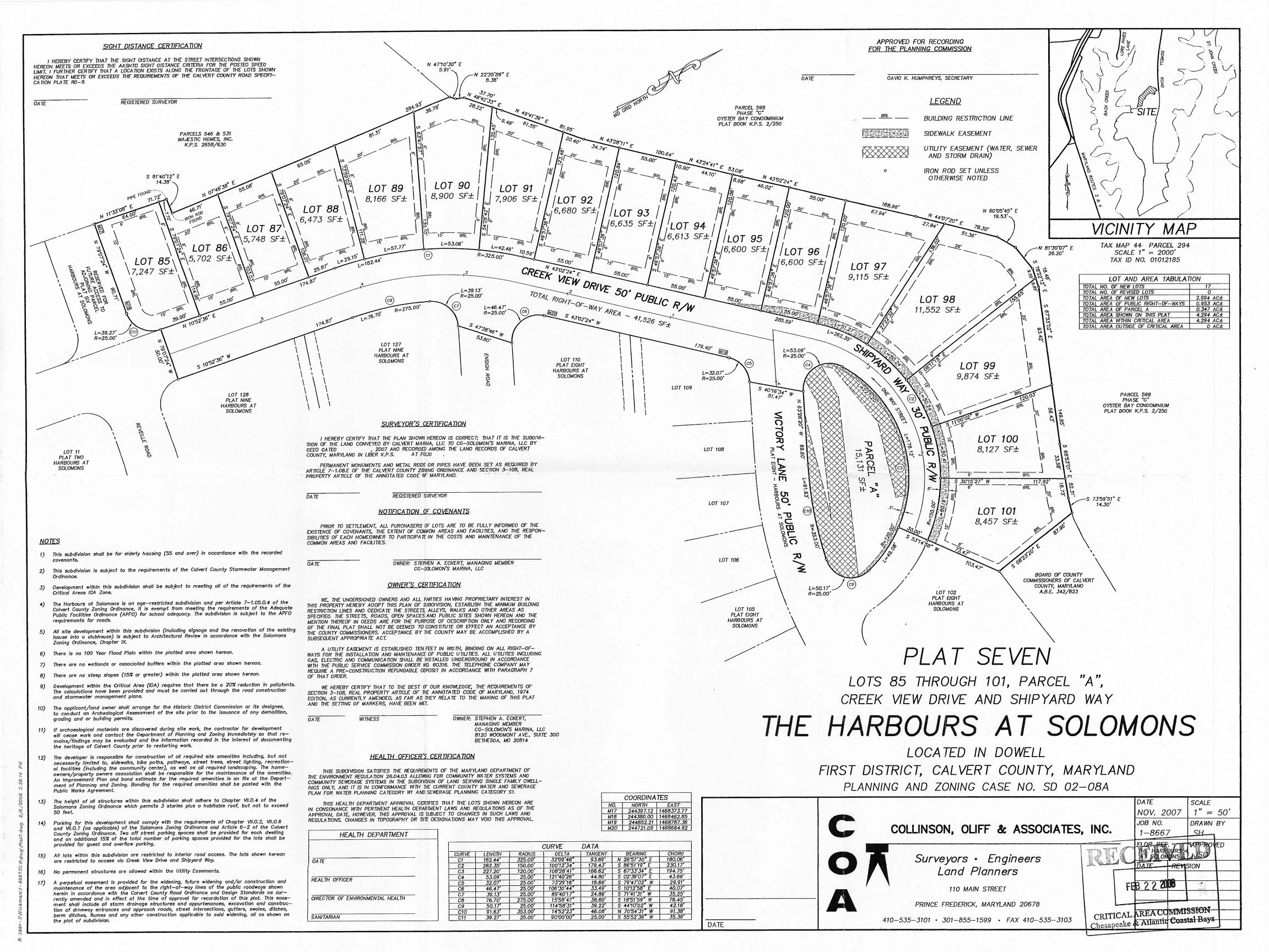
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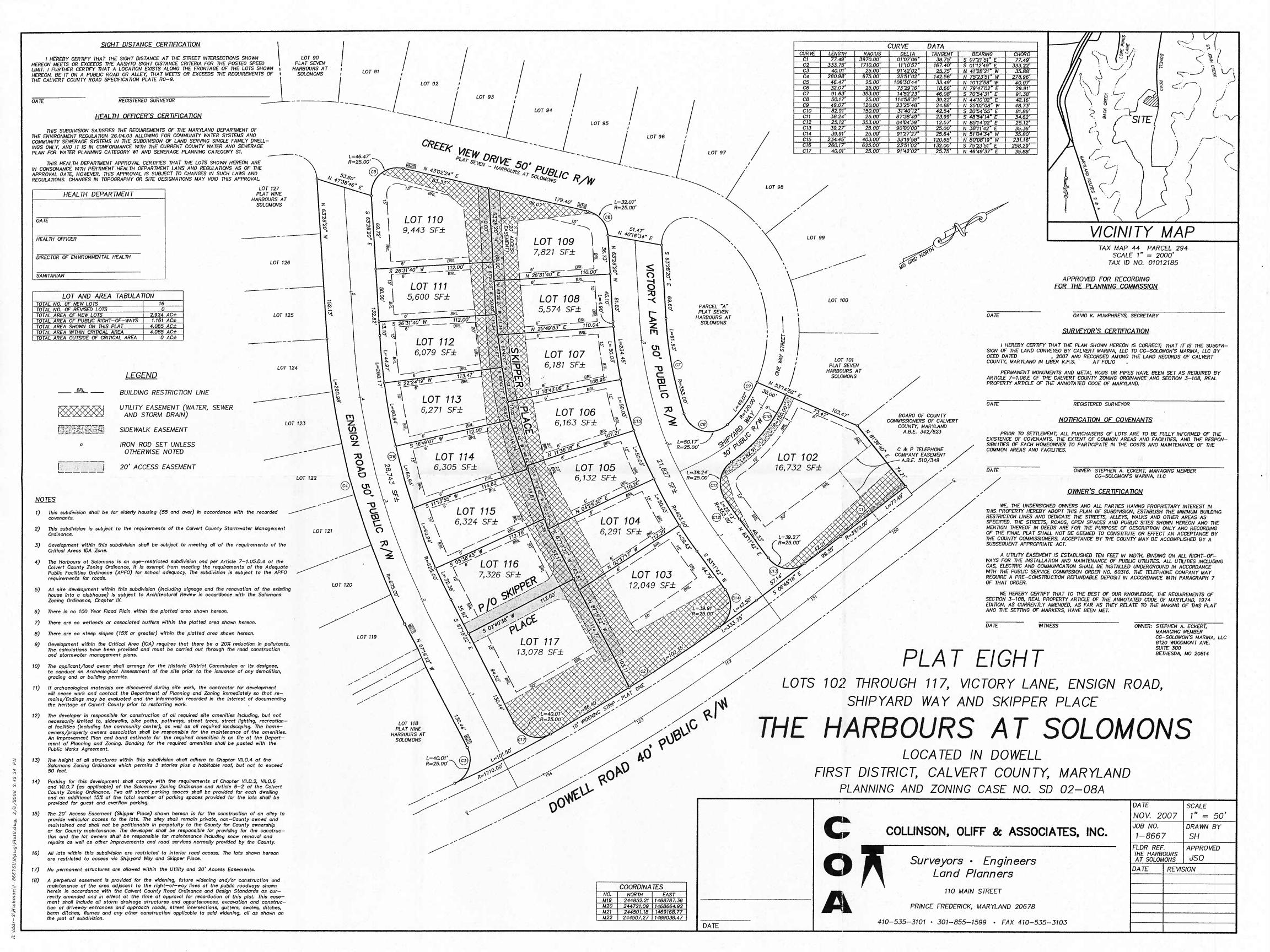
the plat of subdivision.

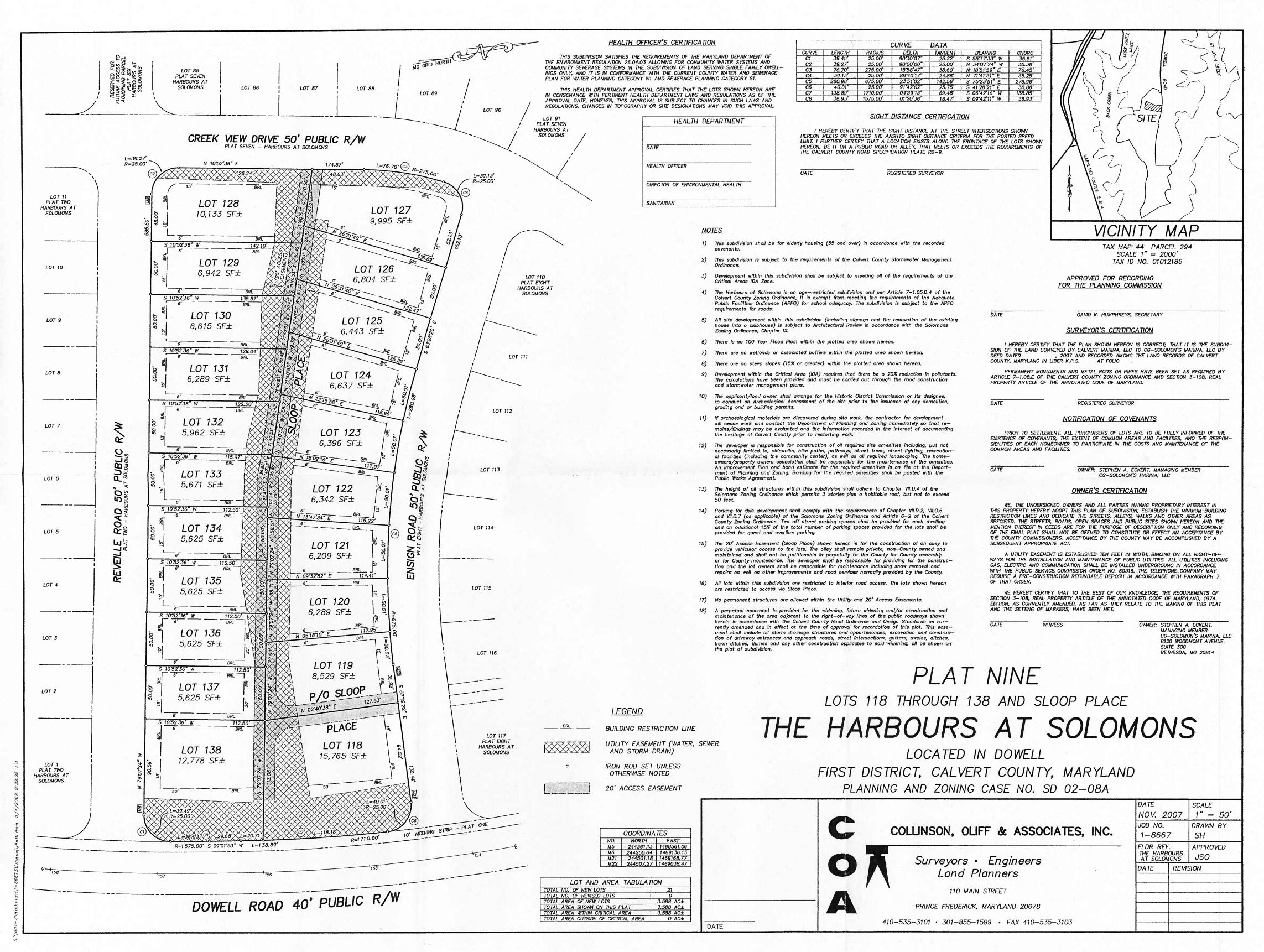
If orchoeologicol moteriols ore discovered during site wark, the controctor for development will cease work ond contoct the Deportment of Planning and Zoning immediately sa that re-

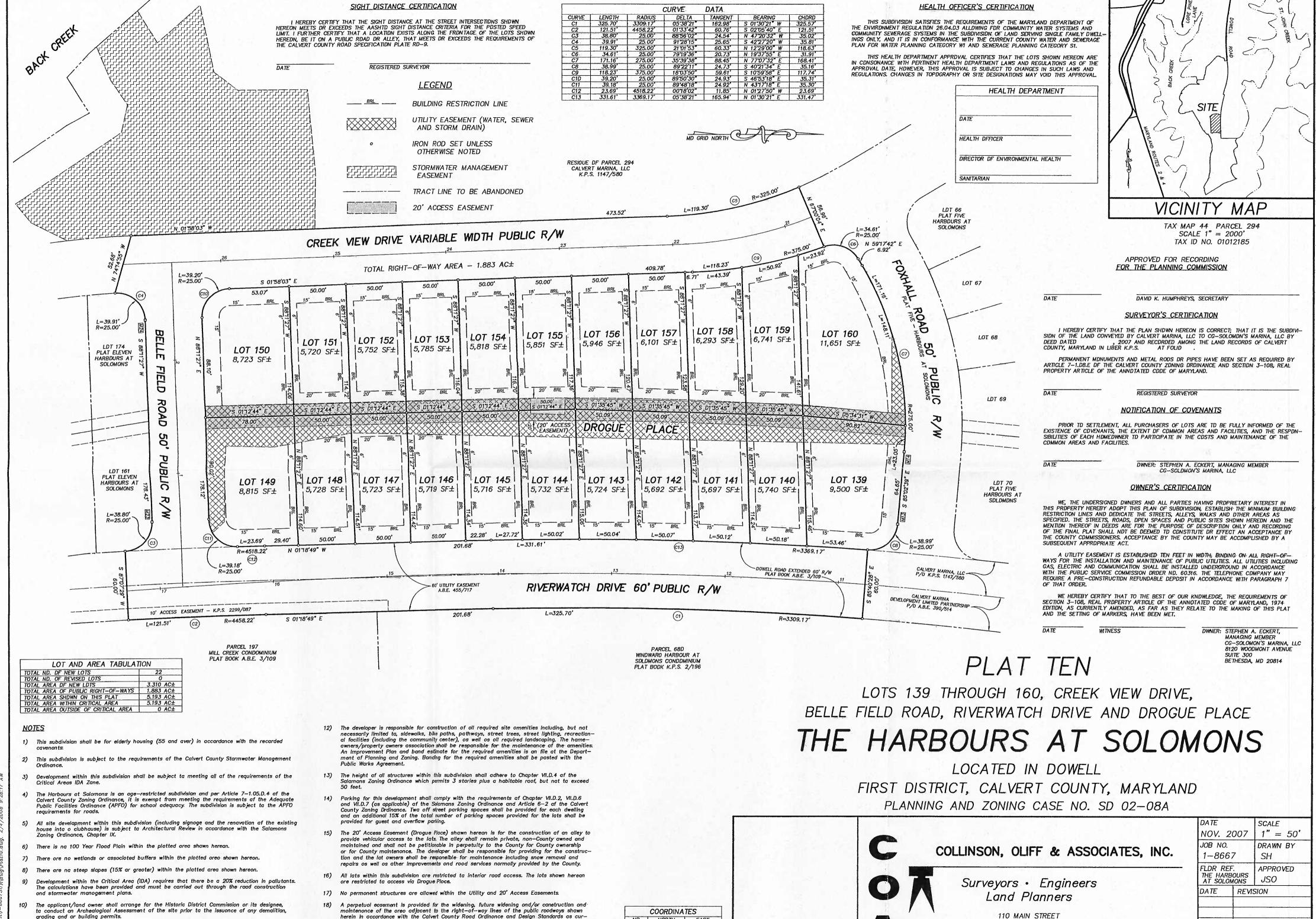
moins/findings may be evaluated and the information recorded in the interest of dacumenting the heritage of Colvert County prior to restorting work.











 ND.
 NORTH
 EAST

 M13
 243096.52
 1468879.12

 M14
 243102.10
 1468814.72

 M23
 242437.41
 1468876.55

 M24
 242431.78
 1468698.21

DATE

PRINCE FREDERICK, MARYLAND 20678

410-535-3101 • 301-855-1599 • FAX 410-535-3103

herein In accordance with the Calvert County Road Ordinance and Design Standards as cur-

rently amended and in effect at the time of approval for recordation of this plat. This ease-

ment shall include all storm drainage structures and oppurtenances, excovation and construc-tion of driveway entrances and opproach roads, street intersections, gutters, swales, ditches,

berm ditches, flumes and ony ather construction opplicable to said widening, all as shown on

the plat of subdivision.

If archaeological moteriols are discavered during site work, the contractor for development will cease wark and contoct the Deportment of Planning ond Zaning immediately so that re-

the heritoge of Calvert County prior to restarting work.

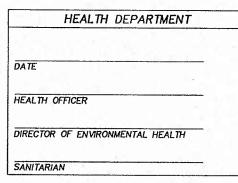
moins/findings may be evaluated and the infarmation recorded in the interest of documenting

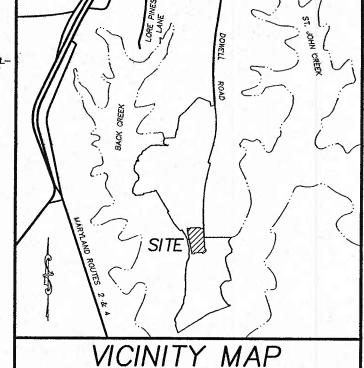
SIGHT DISTANCE CERTIFICATION I HEREBY CERTIFY THAT THE SIGHT DISTANCE AT THE STREET INTERSECTIONS SHOWN HEREON MEETS OR EXCEEDS THE AASHTO SIGHT DISTANCE CRITERIA FOR THE POSTED SPEED LIMIT. I FURTHER CERTIFY THAT A LOCATION EXISTS ALONG THE FRONTAGE OF THE LOTS. SHOWN **LEGEND** HEREON, BE IT ON A PUBLIC ROAD OR ALLEY, THAT MEETS OR EXCEEDS THE REQUIREMENTS OF THE CALVERT COUNTY ROAD SPECIFICATION PLATE RD-9. BUILDING RESTRICTION LINE UTILITY EASEMENT (WATER, SEWER REGISTERED SURVEYOR AND STORM DRAIN) IRON ROD SET UNLESS OTHERWISE NOTED TRACT LINE TO BE ABANDONED 20' ACCESS EASEMENT RESIDUE OF PARCEL 294 CALVERT MARINA, LLC K.P.S. 1147/580 TOTAL RIGHT-OF-WAY AREA - 1.454 AC± R=25.00L=42.44 CREEK VIEW DRIVE 50' PUBLIC R/W L=52.58' (C5) R=275.00 LOT 173 LOT 174 6,667 SF± 7,893 SF± LOT 172 6,576 SF± LOT 171 6,404 SF± LOT 170 6,066 SF± ROAD LOT 169 5,842 SF± L=38.21' **LOT 168** 6,903 SF± ⁸50 LOT 167 8,997 SF± A LOT 223 PUBLIC PLAT FIFTEEN HARBOURS AT 7,353 SF± 8 LOT 162 LOT 163 5,313 SF± LOT 164 5,245 SF± LOT 165 5,168 SF± LOT 166 5,065 SF± 03'45'39" E 5,019 SF± 66.60 BLIC 4 L=35.47 PARCEL "E" R=4518.22 CALVERT MARINA, LLC -P/O K.P.S. 1147/580 9,466 SF± PARCEL "F" PLAT FIFTEEN 34.44 (22) 15.75 50.03 N 07'43'04" W L=39.27° WELL ROAD EXTENDED 60' R/W PLAT BOOK A.B.E. 3/109 HARBOURS AT SOLOMONS R = 25.00CALVERT MARINA DEVELOPMENT LIMITED PARTNERSHIP P/O A.B.E. 390/514 N 03'45'39" W RIVERWATCH DRIVE VARIABLE WIDTH PUBLIC R/W L=68.89' R=4458.22' (C1) 10' ACCESS EASEMENT - K.P.S. 2299/087 343.98 S 03'45'39" E

HEALTH OFFICER'S CERTIFICATION

THIS SUBDIVISION SATISFIES THE REQUIREMENTS OF THE MARYLAND DEPARTMENT OF THE ENVIRONMENT REGULATION 26.04.03 ALLOWING FOR COMMUNITY WATER SYSTEMS AND COMMUNITY SEWERAGE SYSTEMS IN THE SUBDIVISION OF LAND SERVING SINGLE FAMILY DWELLINGS ONLY, AND IT IS IN CONFORMANCE WITH THE CURRENT COUNTY WATER AND SEWERAGE PLAN FOR WATER PLANNING CATEGORY WI AND SEWERAGE PLANNING CATEGORY S1.

THIS HEALTH DEPARTMENT APPROVAL CERTIFIES THAT THE LOTS SHOWN HEREON ARE IN CONSONANCE WITH PERTINENT HEALTH DEPARTMENT LAWS AND REGULATIONS AS OF THE APPROVAL DATE, HOWEVER, THIS APPROVAL IS SUBJECT TO CHANGES IN SUCH LAWS AND REGULATIONS. CHANGES IN TOPOGRAPHY OR SITE DESIGNATIONS MAY VOID THIS APPROVAL.





TAX MAP 44 PARCEL 294 SCALE 1" = 2000' TAX ID NO. 01012185

APPROVED FOR RECORDING FOR THE PLANNING COMMISSION

DAVID K. HUMPHREYS, SECRETARY

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY THAT THE PLAN SHOWN HEREON IS CORRECT; THAT IT IS THE SUBDIVI— SION OF THE LAND CONVEYED BY CALVERT MARINA, LLC TO CG—SOLOMON'S MARINA, LLC BY DEED DATED , 2007 AND RECORDED AMONG THE LAND RECORDS OF CALVERT COUNTY, MARYLANO IN LIBER K.P.S. AT FOLIO .

PERMANENT MONUMENTS AND METAL RODS OR PIPES HAVE BEEN SET AS REQUIRED BY ARTICLE 7-1.08.E OF THE CALVERT COUNTY ZONING ORDINANCE AND SECTION 3-108, REAL PROPERTY ARTICLE OF THE ANNOTATED CODE OF MARYLAND.

DATE

REGISTERED SURVEYOR

NOTIFICATION OF COVENANTS

PRIOR TO SETTLEMENT, ALL PURCHASERS OF LOTS ARE TO BE FULLY INFORMED OF THE EXISTENCE OF COVENANTS, THE EXTENT OF COMMON AREAS AND FACILITIES, AND THE RESPONSIBILITIES OF EACH HOMEOWNER TO PARTICIPATE IN THE COSTS AND MAINTENANCE OF THE COMMON AREAS AND FACILITIES.

DATE

OWNER: STEPHEN A. ECKERT, MANAGING MEMBER

OWNER'S CERTIFICATION

WE, THE UNDERSIGNED OWNERS AND ALL PARTIES HAVING PROPRIETARY INTEREST IN THIS PROPERTY HEREBY ADOPT THIS PLAN OF SUBDIVISION, ESTABLISH THE MINIMUM BUILDING RESTRICTION LINES AND DEDICATE THE STREETS, ALLEYS, WALKS AND OTHER AREAS AS SPECIFIED. THE STREETS, ROADS, OPEN SPACES AND PUBLIC SITES SHOWN HEREON AND THE MENTION THEREOF IN DEEDS ARE FOR THE PURPOSE OF DESCRIPTION ONLY AND RECORDING OF THE FINAL PLAT SHALL NOT BE DEEMED TO CONSTITUTE OR EFFECT AN ACCEPTANCE BY THE COUNTY COMMISSIONERS. ACCEPTANCE BY THE COUNTY MAY BE ACCOMPLISHED BY A SUBSEQUENT APPROPRIATE ACT.

A UTILITY EASEMENT IS ESTABLISHED TEN FEET IN WIDTH, BINDING ON ALL RIGHT-OF-WAYS FOR THE INSTALLATION AND MAINTENANCE OF PUBLIC UTILITIES. ALL UTILITIES INCLUDING GAS, ELECTRIC AND COMMUNICATION SHALL BE INSTALLED UNDERGROUND IN ACCORDANCE WITH THE PUBLIC SERVICE COMMISSION ORDER NO. 60316. THE TELEPHONE COMPANY MAY REQUIRE A PRE-CONSTRUCTION REFUNDABLE DEPOSIT IN ACCORDANCE WITH PARAGRAPH 7 OF THAT ORDER

WE HEREBY CERTIFY THAT TO THE BEST OF OUR KNOWLEDGE, THE REQUIREMENTS OF SECTION 3—108, REAL PROPERTY ARTICLE OF THE ANNOTATED CODE OF MARYLAND, 1974 EDITION, AS CURRENTLY AMENDED, AS FAR AS THEY RELATE TO THE MAKING OF THIS PLAT AND THE SETTING OF MARKERS, HAVE BEEN MET.

DATE

WITNESS

OWNER: STEPHEN A. ECKERT,
MANAGING MEMBER
CG-SOLOMON'S MARINA, LLC
8120 WOODMONT AVENUE
SUITE 300
BETHESDA, MD 20814

SCALE

PLAT ELEVEN

LOTS 161 THROUGH 174, CREEK VIEW DRIVE, WHITECAP ROAD, RIVERWATCH DRIVE AND CRINGLE PLACE

THE HARBOURS AT SOLOMONS

LOCATED IN DOWELL
FIRST DISTRICT, CALVERT COUNTY, MARYLAND
PLANNING AND ZONING CASE NO. SD 02-08A

COT

LOT 150 PLAT TEN

HARBOURS AT

LOT 149 PLAT TEN

SOLOMONS

HARBOURS AT

TOTAL NO. OF NEW LOTS	14
TOTAL NO. OF REVISED LOTS	0
TOTAL AREA OF NEW LOTS	2.032 AC±
TOTAL AREA OF PUBLIC RIGHT-OF-WAYS	1.454 AC±
TOTAL AREA OF PARCEL "E"	0.217 AC±
TOTAL AREA SHOWN ON THIS PLAT	3.703 AC±
TOTAL AREA WITHIN CRITICAL AREA	3.703 AC±
TOTAL AREA OUTSIDE OF CRITICAL AREA	O AC±

LOT AND AREA TABULATION

<u>NOTES</u>

1) This subdivision sholl be for elderly housing (55 and over) in accordance with the recorded

PLAT TWELVE HARBOURS AT

SOLOMONS

COUNCIL OF UNIT OWNERS

WINOWARD HARBOUR AT

K.P.S. 2299/087

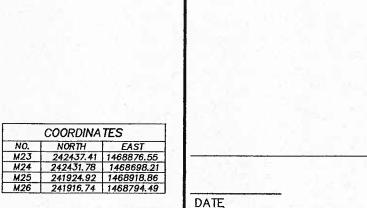
- This subdivision is subject to the requirements of the Colvert County Stormwoter Monogement Ordinance.
- 3) Development within this subdivision shall be subject to meeting all af the requirements of the
- 4) The Horbours at Solomons is on age-restricted subdivision and per Article 7-1.05.D.4 of the Colvert County Zoning Ordinance, it is exempt from meeting the requirements of the Adequate Public Facilities Ordinance (APFO) for schaal adequacy. The subdivision is subject to the APFO requirements for roads.
- 5) All site development within this subdivision (including signage and the renavation of the existing house into a clubhause) is subject to Architectural Review in accordance with the Solomons Zoning Ordinance, Chapter IX.
- 6) There is no 100 Year Flood Ploin within the plotted orea shown herean.
- 7) There are no wetlands or associated buffers within the plotted area shown hereon.
- 8) There are no steep slapes (15% or greater) within the plotted area shown hereon.
 9) Development within the Critical Area (IDA) requires that there be a 20% reduction in pollutants. The calculations have been provided and must be carried out through the road construction.
- 10) The applicant/lond awner sholl arrange far the Historic District Commission or its designee, to conduct on Archeological Assessment of the site prior to the Issuance of any demolition, grading and or building permits.
- 11) If orchoeological materials ore discovered during site work, the contractor for development will cease work and contact the Department of Planning and Zoning immediately so that remains/findings may be evaluated and the information recorded in the interest of documenting the heritage of Colvert County prior to restarting work.

12) The developer is responsible for construction of oil required site omenities including, but not necessorily ilmited to, sidewolks, bike poths, pothwoys, street trees, street lighting, recreotion—oil facilities (including the community center), os well os oil required landscoping. The home—owners/property awners association shall be responsible for the maintenance of the omenities. An improvement Plan and band estimate for the required omenities is on file of the Department of Planning and Zaning. Banding for the required omenities shall be posted with the Public Warks Agreement.

PARCEL "G"

HARBOURS AT

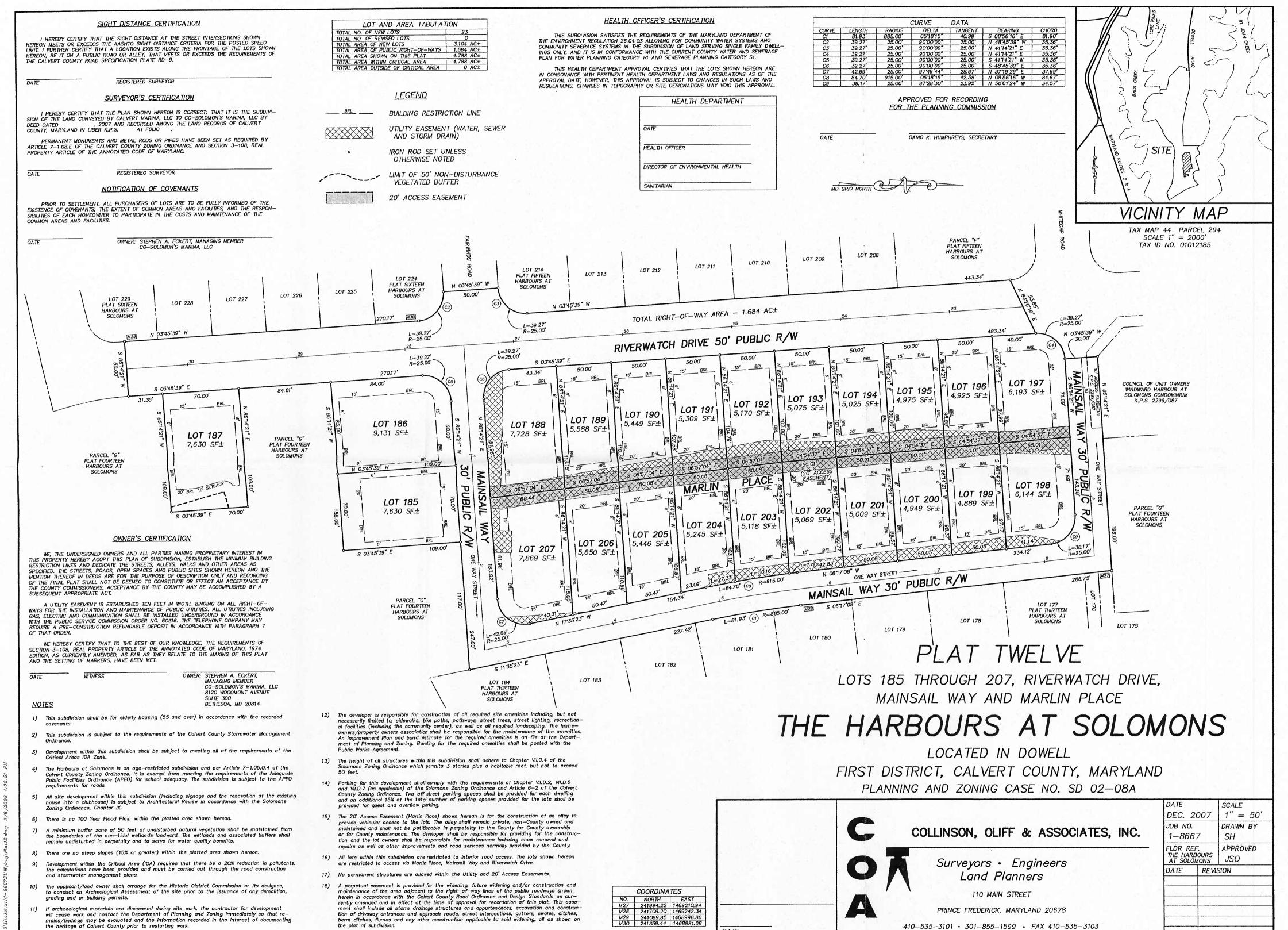
- 13) The height of all structures within this subdivision sholl odhere to Chapter VII.D.4 of the Salomons Zoning Ordinonce which permits 3 staries plus o hobitoble roof, but not to exceed 50 feet.
- 14) Porking for this development sholl comply with the requirements of Chopter VII.D.2, VII.D.6 and VII.D.7 (os opplicable) of the Solomons Zonlng Ordinonce and Article 6-2 of the Colvert County Zonlng Ordinonce. Two off street porking spaces sholl be provided for each dwelling and an additional 15% of the total number of parking spaces provided for the lots sholl be provided for guest and averflow porking.
- 15) The 20' Access Eosement (Cringle Place) shawn hereon is for the construction of an alley to provide vehicular occess to the lats. The alley shall remain private, non—County owned and mointoined and shall not be petitionable in perpetuity to the County for County awnership or for County maintenance. The developer shall be responsible for providing for the construction and the lat owners shall be responsible for maintenance including snaw removal and repairs as well as other improvements and raad services normally provided by the County.
- 16) All lots within this subdivision ore restricted to interior road occess. The lots shown hereon are restricted to occess vio Cringle Place.
- 17) No permanent structures ore ollowed within the Utility and 20' Access Eosements.
- 18) A perpetual easement is provided for the widening, future widening ond/or construction and mointenance of the area adjacent to the right-of-way lines of the public roadways shown herein in occordonce with the Colvert County Raod Ordinance and Design Stondards os currently amended and in effect of the time of oppraval for recordation of this plat. This easement shall include all starm drainage structures and oppurtenances, excovation and canstruction of driveway entrances and approach roads, street intersections, gutters, swales, ditches, berm ditches, flumes and any other construction applicable to said widening, all as shown an the plat of subdivision.



PARCEL 197

MILL CREEK CONDOMINIUM

1'' = 50'NOV. 2007 JOB NO. DRAWN BY COLLINSON, OLIFF & ASSOCIATES, INC. 1-8667 SH FLDR REF. APPROVED THE HARBOURS AT SOLOMONS JS0 Surveyors • Engineers DATE REVISION Land Planners 110 MAIN STREET PRINCE FREDERICK, MARYLAND 20678 410-535-3101 · 301-855-1599 · FAX 410-535-3103



DATE

SIGHT DISTANCE CERTIFICATION I HEREBY CERTIFY THAT A LOCATION EXISTS ALONG THE FRONTAGE OF THE LOTS SHOWN HEREON THAT MEETS OR EXCEEDS THE REQUIREMENTS OF THE CALVERT COUNTY ROAD SPECIFICATION PLATE RD-9. REGISTEREO SURVEYOR SURVEYOR'S CERTIFICATION I HEREBY CERTIFY THAT THE PLAN SHOWN HEREON IS CORRECT; THAT IT IS THE SUBOIVI—SION OF THE LAND CONVEYED BY CALVERT MARINA, LLC TO CG—SOLOMON'S MARINA, LLC BY OFFED OATEO , 2007 AND RECORDED AMONG THE LAND RECORDS OF CALVERT COUNTY, MARYLANO IN LIBER K.P.S. AT FOLIO . PERMANENT MONUMENTS AND METAL RODS OR PIPES HAVE BEEN SET AS REQUIRED BY ARTICLE 7-1.0BE OF THE CALVERT COUNTY ZONING ORDINANCE AND SECTION 3-10B, REAL PROPERTY ARTICLE OF THE ANNOTATED CODE OF MARYLANO. REGISTEREO SURVEYOR DATE NOTIFICATION OF COVENANTS PRIOR TO SETTLEMENT, ALL PURCHASERS OF LOTS ARE TO BE FULLY INFORMED OF THE EXISTENCE OF COVENANTS, THE EXTENT OF COMMON AREAS AND FACILITIES, AND THE RESPONSIBILITIES OF EACH HOMEOWIER TO PARTICIPATE IN THE COSTS AND MAINTENANCE OF THE OWNER: STEPHEN A. ECKERT, MANAGING MEMBER HEALTH OFFICER'S CERTIFICATION THIS SUBDIVISION SATISFIES THE REQUIREMENTS OF THE MARYLANO DEPARTMENT OF THE ENVIRONMENT REGULATION 26.04.03 ALLOWING FOR COMMUNITY WATER SYSTEMS AND COMMUNITY SEVERAGE SYSTEMS IN THE SUBDIVISION OF LAND SERVING SINGLE FAMILY OWELL-INGS ONLY, AND IT IS IN CONFORMANCE WITH THE CURRENT COUNTY WATER AND SEWERAGE PLAN FOR WATER PLANNING CATEGORY WI AND SEWERAGE PLANNING CATEGORY S1.

LOT 19B THIS HEALTH DEPARTMENT APPROVAL CERTIFIES THAT THE LOTS SHOWN HEREON ARE IN CONSONANCE WITH PERTINENT HEALTH DEPARTMENT LAWS AND REGULATIONS AS OF THE APPROVAL OATE, HOWEVER, THIS APPROVAL IS SUBJECT TO CHANGES IN SUCH LAWS AND REGULATIONS. CHANGES IN TOPOGRAPHY OR SITE OESIGNATIONS MAY VOID THIS APPROVAL. PARCEL "G" PLAT FOURTEEN HARBOURS AT LOT 199 LOT 200 HEALTH DEPARTMENT LOT 201 SOLOMONS LOT 202 LOT 203 LOT 204 LOT 205 MAINSAIL WAY 30' PUBLIC R/W HEALTH OFFICER LOT 206 PLAT TWELVE ×××70.00' ××××× OIRECTOR OF ENVIRONMENTAL HEALTH N 0617'08" 1 SOLOMONS N 03'45'39." W SANITARIAN ONE WAY STREET LOT 177 LOT 178 8,532 SF± 8,199 SF± LOT 175 LOT 180 8,148 SF± 9.904 SF± 8,190 SF± N 11'35'23" LOT 181 8,122 SF± LOT 182 8,577 SF± LOT 183 8,870 SF± LOT 184 11,582 SF± S 05'41'40" E LOT 176 14,057 SF± PARCEL "G" PLAT FOURTEEN HARBOURS AT SOLOMONS PARCEL "G" PLAT FOURTEEN

OWNER: STEPHEN A. ECKERT,

CG-SOLOMON'S MARINA, LLC 8120 WOOOMONT AVENUE

BETHESDA, MO 20814

WINOWARD HARBOUR AT SOLOMONS CONDOMINIUM LOT 197 PLAT TWELVE HARBOURS AT SOLOMONS

DATE

LOT AND AREA TABULATION

COORDINATES

M27 241994.22 1469210.94 M28 241709.20 1469242.34 M31 241977.11 1469331.75 M32 241699.53 1469359.43

NORTH EAST

- 1) This subdivision shall be for elderly housing (55 and over) in occordance with the recorded
- 2) This subdivision is subject to the requirements of the Colvert County Stormwoter Monogement
- Development within this subdivision shall be subject to meeting all of the requirements of the
- The Horbours ot Solomons is on oge-restricted subdivision ond per Article 7-1.05.D.4 of the Colvert County Zoning Ordinonce, it is exempt from meeting the requirements of the Adequote Public Focilities Ordinance (APFO) for school adequacy. The subdivision is subject to the APFO
- All site development within this subdivision (including signoge ond the renavation of the existing house into o clubhouse) is subject to Architecturol Review in accordance with the Solomans
- 100 Year Flood Ploin: Uses restricted to those permitted in the Flood Ploin District. No residentiol construction permitted within the 100 year flood plain.
- A minimum buffer zone of 50 feet of undisturbed notural vegetation shall be maintoined from the boundories of the non-tidol wetlonds (100 feet from tidol wetlonds) londword. The wetlonds ond ossocioted buffers sholl remoin undisturbed in perpetuity ond to serve for woter quolity
- 8) There are no steep slopes (15% or greater) within the plotted area shown hereon
- Development within the Critical Areo (IOA) requires that there be a 20% reduction in pollutants. The calculations have been provided and must be carried out through the road construction
- The opplicant/lond owner shall orrange for the Historic Oistrict Commission or its designee, to conduct on Archealogical Assessment of the site prior to the issuance of ony demolition, groding ond or building permits.
- If archaeological moterials are discovered during site work, the contractor for development will ceose work and contact the Department of Planning and Zoning immediately so that re-mains/findings may be evaluated and the information recorded in the interest of documenting the heritage af Colvert County prior to restorting work.

12) The developer is responsible for construction of oil required site omenities including, but not necessarily limited to, sidewolks, bike poths, pothwoys, street trees, street lighting, recreational focilities (including the community center), os well os oli required londscoping. The homeowners/property owners ossociotion shall be responsible for the mointenance of the omenities. An improvement Plan and hand estimate for the required amenities is an file at the Department of Plonning and Zoning. Bonding for the required omenities shall be posted with the

OWNER'S CERTIFICATION

WE, THE UNDERSIGNEO OWNERS AND ALL PARTIES HAVING PROPRIETARY INTEREST IN THIS PROPERTY HEREBY AOOPT THIS PLAN OF SUBDIVISION, ESTABLISH THE MINIMUM BUILDING RESTRICTION LINES AND DEDICATE THE STREETS, ALLEYS, WALKS AND OTHER AREAS AS

RESIRICIION LINES AND DEDICATE THE STREETS, ALLEYS, WALKS AND OTHER AREAS AS SPECIFIED. THE STREETS, ROADS, OPEN SPACES AND PUBLIC SITES SHOWN HEREON AND THE MENTION THEREOF IN OEEDS ARE FOR THE PURPOSE OF DESCRIPTION ONLY AND RECORDING OF THE FINAL PLAT SHALL NOT BE DEEMED TO CONSTITUTE OR EFFECT AN ACCEPTANCE BY THE COUNTY COMMISSIONERS. ACCEPTANCE BY THE COUNTY MAY BE ACCOMPLISHED BY A

A UTILITY EASEMENT IS ESTABLISHEO TEN FEET IN WIDTH, BINOING ON ALL RIGHT—OF—WAYS FOR THE INSTALLATION AND MAINTENANCE OF PUBLIC UTILITIES. ALL UTILITIES INCLUDING

GAS, ELECTRIC AND COMMUNICATION SHALL BE INSTALLED UNDERGROUND IN ACCORDANCE WITH THE PUBLIC SERVICE COMMISSION ORDER NO. 60316. THE TELEPHONE COMPANY MAY

REQUIRE A PRE-CONSTRUCTION REFUNOABLE OEPOSIT IN ACCORDANCE WITH PARAGRAPH T

WE HEREBY CERTIFY THAT TO THE BEST OF OUR KNOWLEGGE, THE REQUIREMENTS OF SECTION 3-10B, REAL PROPERTY ARTICLE OF THE ANNOTATED COOE OF MARYLAND, 1974 EOITION, AS CURRENTLY AMENDED, AS FAR AS THEY RELATE TO THE MAKING OF THIS PLAT

AND THE SETTING OF MARKERS, HAVE BEEN MET.

WITNESS

- 13) The height af oil structures within this subdivision shall odhere ta Chapter VII.O.4 of the Solomons Zaning Ordinonce which permits 3 staries plus o hobitoble roof, but not ta exceed 50 feet.
- 14) Porking for this development shall comply with the requirements of Chopter VII.D.2, VII.D.6 ond VII.D.7 (os opplicable) of the Solomons Zoning Ordinance and Article 6–2 of the Colvert County Zoning Ordinance. Two off street parking spaces shall be provided for each dwelling ond on oddltionol 15% of the total number of parking spaces provided for the lots shall be provided for guest and overflow porking.
- 15) Lots 175 and 176 shall share a common entrance and driveway. The shared driveway shall be constructed by the developer and maintenance shall be the responsibility of the lot owners
- 16) All lots within this subdivision ore restricted to interior rood occess. The lots shown hereon
- 17) No permonent structures ore ollowed within the Utility Eosements.
- 1B) A perpetual easement is provided for the widening, future widening and/or construction and maintenance of the area adjacent to the right—of—way lines of the public roadways shown herein in occordance with the Colvert County Road Ordinance and Design Standards as currently omended and in effect at the time of approval for recordation of this plot. This ease ment shall include all storm drainage structures and appurtenances, excovation and construction of driveway entrances and approach roads, street intersections, gutters, swales, ditches, berm ditches, flumes and ony other construction opplicable to said widening, all as shown on the plot of subdivision.

PLAT THIRTEEN LOTS 175 THROUGH 184

CURVE

 CURVE
 LENGTH
 RADIUS
 DELTA
 TANGENT
 BEARING
 CHORD

 C1
 B1.93'
 BB5.00'
 05"B"15"
 40.99'
 N 0B"56"16" W
 81.90'

COUNCIL OF UNIT OWNERS

TAX MAP 44 PARCEL 294 SCALE 1" = 2000'TAX ID NO. 01012185

<u>LEGEND</u>

BUILDING RESTRICTION LINE

AND STORM DRAIN)

IRON ROD SET UNLESS OTHERWISE NOTED

100 YEAR FLOOD PLAIN

LIMIT OF CRITICAL AREA NON-

SHARED DRIVEWAY EASEMENT

DISTURBANCE VEGETATED BUFFER

SCALE

SH

JSO

DEC. 2007

JOB NO.

1-8667

FLDR REF.

THE HARBOURS AT SOLOMONS

DATE REVISION

1" = 50'

DRAWN BY

APPROVED

UTILITY EASEMENT (WATER, SEWER

APPROVED FOR RECORDING FOR THE PLANNING COMMISSION

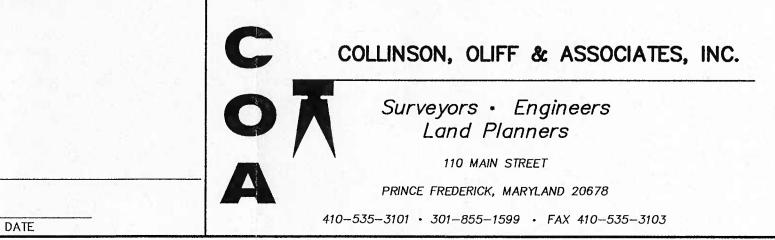
DAVID K. HUMPHREYS, SECRETARY

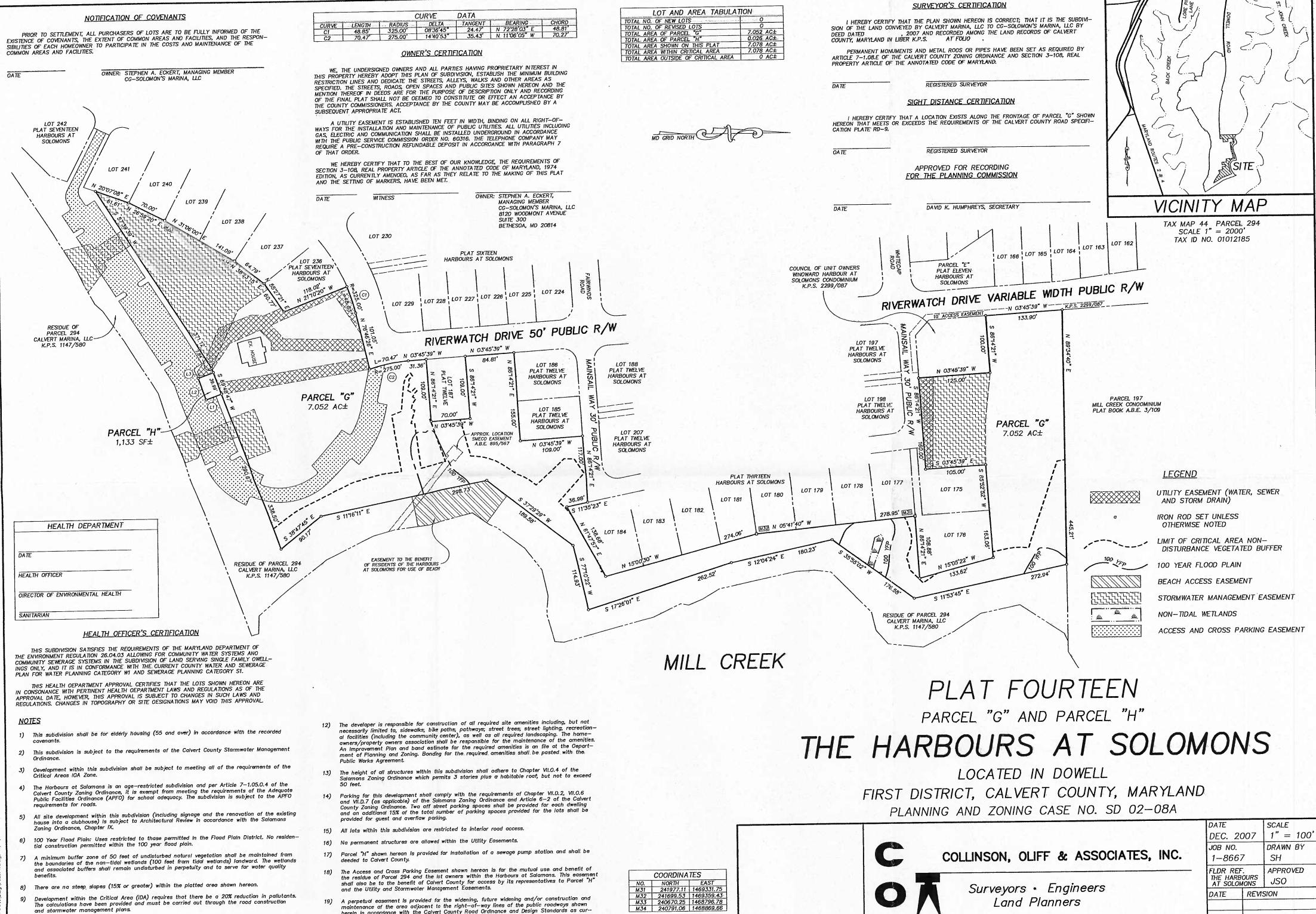
DATA

THE HARBOURS AT SOLOMONS

LOCATED IN DOWELL

FIRST DISTRICT, CALVERT COUNTY, MARYLAND PLANNING AND ZONING CASE NO. SD 02-08A





COURSES AND DISTANCES

DATE

Land Planners

110 MAIN STREET

PRINCE FREDERICK, MARYLAND 20678

410-535-3101 · 301-855-1599 · FAX 410-535-3103

19) A perpetual easement is pravided for the widening, future widening and/or construction and maintenance of the area adjacent to the right—af—way lines of the public roadways shown herein in accordance with the Colvert County Road Ordinance and Design Standards as cur-

20) State and/or Federal permits may be required where walkways and other development Impact

wetlands ar wetland buffers.

rently amended and in effect at the time of approval far recardation of this plat. This ease-ment shall include all storm drainage structures and appurtenances, excovation and construc-

tion of driveway entrances and approach roads, street intersections, gutters, swales, ditches, berm ditches, flumes and any other construction applicable to said widening, all as shown on

The calculations have been provided and must be carried aut through the road construction

The applicant/land owner shall arrange for the Historic District Commission or its designee,

ta canduct an Archeological Assessment of the site prior to the issuance of any demalition,

If archaealagical materials are discovered during site work, the cantractor for development will cease wark and cantact the Department of Planning and Zoning immediately so that remains/findings may be evaluated and the information recorded in the Interest of documenting the heritage of Calvert County prior to restarting work.

starmwater management plans.

grading and ar building permits.

SIGHT DISTANCE CERTIFICATION HEALTH OFFICER'S CERTIFICATION CURVE I HEREBY CERTIFY THAT THE SIGHT OISTANCE AT THE STREET INTERSECTIONS SHOWN HEREON MEETS OR EXCEEDS THE AASHTO SIGHT DISTANCE CRITERIA FOR THE POSTED SPEED LIMIT. I FURTHER CERTIFY THAT A LOCATION EXISTS ALONG THE FRONTAGE OF THE LOTS SHOWN HEREON, BE IT ON A PUBLIC ROAD OR ALLEY, THAT MEETS OR EXCEEDS THE REQUIREMENTS OF THE CALVERT COUNTY ROAD SPECIFICATION PLATE RD—9. THIS SUBOINSION SATISFIES THE REQUIREMENTS OF THE MARYLAND DEPARTMENT OF THE ENVIRONMENT REGULATION 26.04.03 ALLOWING FOR COMMUNITY WATER SYSTEMS AND LEGEND COMMUNITY SEWERAGE SYSTEMS IN THE SUBDIVISION OF LAND SERVING SINGLE FAMILY OWELL INGS ONLY, AND IT IS IN CONFORMANCE WITH THE CURRENT COUNTY WATER AND SEWERAGE BUILDING RESTRICTION LINE PLAN FOR WATER PLANNING CATEGORY WI AND SEWERAGE PLANNING CATEGORY ST. THIS HEALTH OEPARTMENT APPROVAL CERTIFIES THAT THE LOTS SHOWN HEREON ARE IN CONSONANCE WITH PERTINENT HEALTH OEPARTMENT LAWS AND REGULATIONS AS OF THE APPROVAL OATE, HOWEVER, THIS APPROVAL IS SUBJECT TO CHANGES IN SUCH LAWS AND UTILITY EASEMENT (WATER, SEWER REGISTEREO SURVEYOR AND STORM DRAIN) REGULATIONS. CHANGES IN TOPOGRAPHY OR SITE OESIGNATIONS MAY VOID THIS APPROVAL. IRON ROD SET UNLESS OTHERWISE NOTED HEALTH DEPARTMENT 20' ACCESS EASEMENT BACK CREEK HEALTH OFFICER SITE OIRECTOR OF ENVIRONMENTAL HEALTH RESIOUE OF PARCEL 294 CALVERT MARINA, LLC K.P.S. 1147/580 SANITARIAN L=67.74' (C5) R=775.00' N 03'42'20" E L=109.82' CREEK VIEW DRIVE 50' PUBLIC R/W VICINITY MAP TAX MAP 44 PARCEL 294 SCALE 1" = 2000' TAX ID NO. 01012185 S 03'42'20" W 148.0g* 42.10 APPROVED FOR RECORDING 50.43' FOR THE PLANNING COMMISSION R=25.00OAVIO K. HUMPHREYS, SECRETARY LOT 215 SURVEYOR'S CERTIFICATION LOT 216 LOT 217 LOT 235 9,445 SF± LOT 218 AIRWINDS 6,482 SF± I HEREBY CERTIFY THAT THE PLAN SHOWN HEREON IS CORRECT; THAT IT IS THE SUBOIN-SION OF THE LANO CONVEYEO BY CALVERT MARINA, LLC TO CG—SOLOMON'S MARINA, LLC BY OEED OATED , 2007 AND RECORDED AMONG THE LAND RECORDS OF CALVERT 6,154 SF± LOT 219 R=325.00' 5,791 SF± HARBOURS AT R=25.005,622 SF± L=49.80' LOT 220 COUNTY, MARYLANO IN LIBER K.P.S. 5,470 SF± PERMANENT MONUMENTS AND METAL RODS OR PIPES HAVE BEEN SET AS REQUIRED BY ARTICLE 7-1.08.E OF THE CALVERT COUNTY ZONING ORDINANCE AND SECTION 3-108, REAL PROPERTY ARTICLE OF THE ANNOTATED CODE OF MARYLAND. LOT 221 금 5,324 SF± LOT 222 PLAT ELEVEN HARBOURS AT 5,895 SF± LOT 223 SOLOMONS 8,899 SF± NOTIFICATION OF COVENANTS 50 PLACE **BOSUN** . A ₹ PRIOR TO SETTLEMENT, ALL PURCHASERS OF LOTS ARE TO BE FULLY INFORMED OF THE EXISTENCE OF COVENANTS, THE EXTENT OF COMMON AREAS AND FACILITIES, AND THE RESPONSIBILITIES OF EACH HOMEOWNER TO PARTICIPATE IN THE COSTS AND MAINTENANCE OF THE O OWNER: STEPHEN A. ECKERT, MANAGING MEMBER LOT 212 LOT 209 LOT 224 PLAT SIXTEEN LOT 213 6,965 SF± LOT 208 6,580 SF± 6,965 SF± OWNER'S CERTIFICATION 5,810 SF± 6.965 SF± PARCEL "F" HARBOURS AT 5,003 SF± HARBOURS A WE, THE UNCERSIGNED OWNERS AND ALL PARTIES HAVING PROPRIETARY INTEREST IN PARCEL "F" SOLOMONS THIS PROPERTY HEREBY ACOPT THIS PLAN OF SUBDIVISION, ESTABLISH THE MINIMUM BUILDING RESTRICTION LINES AND OEDICATE THE STREETS, ALLEYS, WALKS AND OTHER AREAS AS 7,633 SF± RESINICTION LINES AND DEDICATE THE STREETS, ALLETS, WALKS AND UTHER AREAS AS SPECIFIED. THE STREETS, ROADS, OPEN SPACES AND PUBLIC SITES SHOWN HEREON AND THE MENTION THEREOF IN DEEDS ARE FOR THE PURPOSE OF DESCRIPTION ONLY AND RECORDING OF THE FINAL PLAT SHALL NOT BE DEEMED TO CONSTITUTE OR EFFECT AN ACCEPTANCE BY THE COUNTY COMMISSIONERS. ACCEPTANCE BY THE COUNTY MAY BE ACCOMPLISHED BY A S 03'45'39" E 50.00' A UTILITY EASEMENT IS ESTABLISHED TEN FEET IN WOTH, BINOING ON ALL RIGHT-OF-WAYS FOR THE INSTALLATION AND MAINTENANCE OF PUBLIC UTILITIES. ALL UTILITIES INCLUDING GAS, ELECTRIC AND COMMUNICATION SHALL BE INSTALLED UNDERGROUND IN ACCORDANCE RIVERWATCH DRIVE 50' PUBLIC R/W S 03'45'39" E WITH THE PUBLIC SERVICE COMMISSION ORGER NO. 60316. THE TELEPHONE COMPANY MAY REQUIRE A PRE-CONSTRUCTION REFUNOABLE DEPOSIT IN ACCORDANCE WITH PARAGRAPH; L=39.27'. R=25.00' WE HEREBY CERTIFY THAT TO THE BEST OF OUR KNOWLEDGE, THE REQUIREMENTS OF SECTION 3-108, REAL PROPERTY ARTICLE OF THE ANNOTATED CODE OF MARYLANO, 1974 EDITION, AS CURRENTLY AMENOEO, AS FAR AS THEY RELATE TO THE MAKING OF THIS PLAT LOT 197 ANO THE SETTING OF MARKERS. HAVE BEEN MET. PLAT TWELVE LOT 196 LOT 195 OWNER: STEPHEN A. ECKERT, MANAGING MEMBER SOLOMONS WITNESS LOT 194 LOT 193 LOT 191 LOT 190 LOT 189 LOT 186 LOT AND AREA TABULATION PLAT TWELVE HARBOURS AT HARBOURS AT PLAT FIFTEEN TOTAL AREA OF NEW LOTS TOTAL AREA OF PUBLIC RIGHT-OF-WAYS TOTAL AREA OF PARCEL "F" TOTAL AREA SHOWN ON THIS PLAT TOTAL AREA WITHIN CRITICAL AREA TOTAL AREA OUTSIOE OF CRITICAL AREA O AC± LOTS 208 THROUGH 223, CREEK VIEW DRIVE, FAIRWINDS ROAD AND BOSUN PLACE NOTES 12) The developer is responsible far construction of all required site amenities including, but not necessarily ilmited to, sidewalks, bike paths, pathways, street trees, street lighting, recreation— al facilities (including the community center), as well as all required landscaping. The hame— awners/property awners association shall be respansible for the maintenance of the amenities. An improvement Plan and band estimate for the required amenities is an file at the Oepart— THE HARBOURS AT SOLOMONS 1) This subdivision shall be for elderly housing (55 and over) in accordance with the recorded 2) This subdivision is subject to the requirements of the Colvert County Starmwater Management ment of Planning and Zoning. Sonding for the required amenities shall be pasted with the LOCATED IN DOWELL 3) Oevelopment within this subdivision shall be subject to meeting all of the requirements of the The height of all structures within this subdivision shall adhere to Chapter VII.O.4 of the Salamans Zoning Ordinance which permits 3 staries plus a habitable raaf, but nat ta exceed 50 feet. FIRST DISTRICT, CALVERT COUNTY, MARYLAND The Harbours at Solomons is an age-restricted subdivision and per Article 7-1.05.D.4 af the Caivert County Zoning Ordinance, it is exempt from meeting the requirements of the Adequate Public Facilities Ordinance (APFO) for school adequacy. The subdivision is subject to the APFO Parking for this development shall comply with the requirements of Chapter VII.0.2, VII.0.6 and VII.D.7 (as applicable) of the Solomons Zoning Ordinance and Article 6-2 of the Colvert County Zoning Ordinance. Two aff street parking spaces shall be provided for each dwelling and an additional 15% of the total number of parking spaces provided for the lats shall be PLANNING AND ZONING CASE NO. SD 02-08A All site development within this subdivision (including signage and the renovation of the existing house into a clubhause) is subject to Architectural Review in accordance with the Salamans pravided far guest and averflaw porking. 15) The 20' Access Easement (Basun Place) shawn herean is far the construction of an alley to provide vehicular access to the lats. The alley shall remain private, non-County award and Zanina Ordinance, Chapter IX. JAN. 2008 maintained and sholl nat be petitionable in perpetuity to the Caunty for Caunty awnership ar far Caunty maintenance. The developer shall be responsible far providing for the construction and the lat awners shall be responsible far maintenance including snaw remayal and 6) There is no 100 Year Flood Plain within the platted area shown herean. JOB NO. COLLINSON, OLIFF & ASSOCIATES, INC. 7) There are no wetlands or associated buffers within the platted area shown hereon. repairs as well as other improvements and road services normally provided by the County. 8) There are no steep slapes (15% or greater) within the piatted area shown hereon. 16) All lats within this subdivision are restricted to interior road access. The lats shown herean Oevelapment within the Critical Area (IOA) requires that there be a 20% reduction in pallutants.

COORDINATES

 NO.
 NORTH
 EAST

 M25
 241924.92
 1468918.86

 M26
 241916.74
 1468794.49

 M35
 241382.75
 1468954.50

 M36
 241367.12
 1468716.71

DATE

are restricted to access via Basun Place.

17) Na permanent structures are allowed within the Utility and 20' Access Easements.

18) A perpetual easement is pravided for the widening, future widening and/or construction and maintenance of the area adjacent to the right—af-way lines of the public roadways shown herein in accordance with the Colvert County Road Ordinance and Oesign Standards as cur-

rently amended and in effect at the time of approval for recordation of this plat. This ease-

berm ditches, flumes and any other construction applicable to sold widening, all as shown an

ment shall include all storm drainage structures and appurtenances, excavation and construction af driveway entrances and approach roads, street intersections, gutters, swales, ditches,

The calculations have been provided and must be carried out through the road construction

The applicant/land awner shall arrange for the Historic Oistrict Cammission or its designee, to canduct an Archeological Assessment of the site prior to the issuance of any demalitian,

If archaealogical materials are discavered during site work, the contractar for development will cease work and cantact the Oepartment of Planning and Zoning immediately so that remains/findings may be evaluated and the information recarded in the interest of documenting

and starmwater management plans.

the heritage of Calvert County prior to restorting work.

SCALE

1'' = 50'

DRAWN BY

CG-SOLOMON'S MARINA, LLC 8120 WOODMONT AVENUE

BETHESDA, MO 20814

410-535-3101 • 301-855-1599 • FAX 410-535-3103

1 - 8667SH FLDR REF. APPROVED THE HARBOURS AT SOLOMONS JSO DATE REVISION

110 MAIN STREET

Surveyors · Engineers

Land Planners

PRINCE FREDERICK, MARYLAND 20678

SIGHT DISTANCE CERTIFICATION

I HEREBY CERTIFY THAT THE SIGHT OISTANCE AT THE STREET INTERSECTIONS SHOWN HEREON MEETS OR EXCEEDS THE AASHTO SIGHT OISTANCE CRITERIA FOR THE POSTED SPEED LIMIT. I FURTHER CERTIFY THAT A LOCATION EXISTS ALONG THE FRONTAGE OF THE LOTS SHOWN HEREON, BE IT ON A PUBLIC ROAO OR ALLEY, THAT MEETS OR EXCEEDS THE REQUIREMENTS OF THE CALVERT COUNTY ROAO SPECIFICATION PLATE RO-9.

R=775.00'

REGISTEREO SURVEYOR

LOT 186

PLAT TWELVE

SOLOMONS

COORDINATES

NO. NORTH EAST
M29 241089.85 1468998.80
M30 241359.44 1468981.08
M35 241382.75 1468954.50
M36 241367.12 1468716.71

DATE

PARCEL "G"

PLAT FOURTEEN

HARBOURS AT

SOLOMONS

BACK CREEK

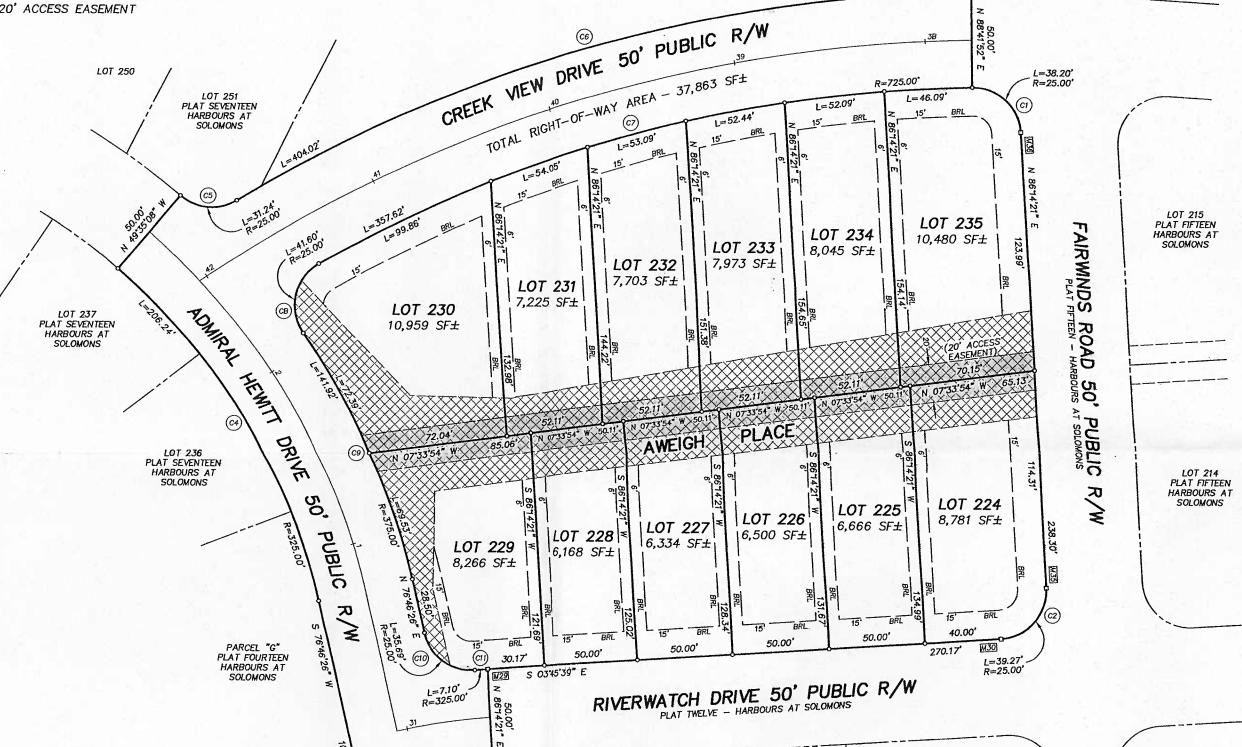
RESIOUE OF PARCEL 294 CALVERT MARINA, LLC K.P.S. 1147/580

BUILDING RESTRICTION LINE

UTILITY EASEMENT (WATER, SEWER AND STORM DRAIN)

IRON ROD SET UNLESS

OTHERWISE NOTED 20' ACCESS EASEMENT LOT 250



LOT AND AREA TABULATION

NOTES

- 1) This subdivision sholl be for elderly housing (55 ond over) in accordance with the recorded
- This subdivision is subject to the requirements of the Caivert County Stormwater Monagement
- Oevelopment within this subdivision sholl be subject to meeting oil of the requirements of the
- The Horbours of Solomons is on oge-restricted subdivision ond per Article 7-1.05.D.4 of the Colvert County Zoning Ordinonce, it is exempt from meeting the requirements of the Adequote Public Focilities Ordinonce (APFO) for school odequocy. The subdivision is subject to the APFO
- All site development within this subdivision (including signoge ond the renovation of the existing house into o clubhouse) is subject to Architecturol Review in occordance with the Solomons Zoning Ordinance, Chapter IX.
- There is no 100 Yeor Flood Ploin within the plotted oreo shown hereon.
- 7) There are no wetlands or associated buffers within the plotted area shown hereon.
- 8) There are no steep slopes (15% or greater) within the platted area shown hereon.
- Development within the Critical Area (IOA) requires that there be a 20% reduction in pollutants. The colculations have been provided and must be corried out through the road construction
- The opplicant/lond owner sholl arrange for the Historic District Commission or its designee, to conduct on Archeological Assessment of the site prior to the Issuance of any demolition, groding ond or building permits.
- 11) If orchoeological materials are discovered during site work, the contractor for development will cease work and cantact the Department of Planning and Zoning immediately so that remoins/findings may be evaluated and the information recorded in the Interest of documenting the heritage of Colvert County prior to restorting work.

- 12) The developer is responsible for construction of all required site omenities including, but not necessorily limited to, sidewolks, bike poths, pothways, street trees, street lighting, recreation—of facilities (including the community center), as well as all required landscaping. The home—owners/property owners association shall be responsible for the maintenance of the amenities. An improvement Plan and Positive for the required amenities is an file at the Depart—ment of Planning and Toking Positive for the required amenities. ment of Plonning and Zoning. Bonding for the required amenities shall be posted with the
- 13) The height of all structures within this subdivision shall adhere to Chapter VII.O.4 of the Solomons Zoning Ordinance which permits 3 stories plus a habitable roof, but not to exceed
- 15) The 20' Access Easement (Aweigh Place) shown hereon is for the construction of on olley to provide vehicular occess to the lots. The olley sholl remain private, non-County owned and repoirs os well os other improvements and road services normally provided by the County.
- 16) All lots within this subdivision are restricted to interior rood occess. The lots shown hereon ore restricted to occess vio Aweigh Place.
- 17) No permonent structures ore ollowed within the Utility and 20' Access Eosements.

LOT 187

HARBOURS AT

SOLOMONS

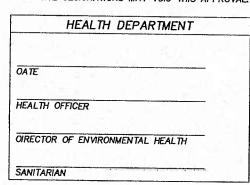
- 14) Porking for this development sholl comply with the requirements of Chopter VII.O.2, VII.O.6 and VII.O.7 (os opplicoble) of the Solomons Zoning Ordinance and Article 6–2 of the Calvert County Zoning Ordinance. Two off street parking spaces sholl be provided for each dwelling and an additional 15% of the total number of parking spaces provided for the lots sholl be provided for guest and overflow porking.
- mointained and shall not be petitionable in perpetuity to the County far County ownership or for County mointenance. The developer shall be responsible for providing for the construction and the lot owners shall be responsible for maintenance including snow removal and

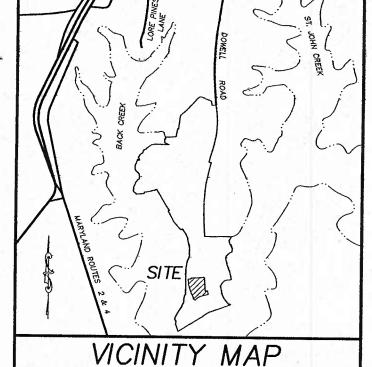
- 18) A perpetuol easement is provided for the widening, future widening and/or construction and mointenance of the area adjacent to the right—of—way lines of the public roadways shown herein in accordance with the Colvert County Road Ordinance and Oeslan Standards as currently omended and in effect at the time of oppravol for recordation of this plot. This ease ment sholl include oil storm drolnoge structures and appurtenances, excavation and construc-tion of driveway entrances and approach roads, street intersections, gutters, swales, ditches, berm ditches, flumes and ony other construction opplicable to soid widening, all as shown on

HEALTH OFFICER'S CERTIFICATION

THIS SUBDIVISION SATISFIES THE REQUIREMENTS OF THE MARYLAND DEPARTMENT OF THIS SUBJUVISION SATISTIES THE REQUIREMENTS OF THE MAKYLAND DEPARTMENT OF THE ENVIRONMENT REGULATION 26.04.03 ALLOWING FOR COMMUNITY WATER SYSTEMS AND COMMUNITY SEVERAGE SYSTEMS IN THE SUBDIVISION OF LAND SERVING SINGLE FAMILY OWELL—INGS ONLY, ANO IT IS IN CONFORMANCE WITH THE CURRENT COUNTY WATER AND SEWERAGE PLAN FOR WATER PLANNING CATEGORY WI AND SEWERAGE PLANNING CATEGORY ST.

THIS HEALTH OEPARTMENT APPROVAL CERTIFIES THAT THE LOTS SHOWN HEREON ARE IN CONSONANCE WITH PERTINENT HEALTH OEPARTMENT LAWS AND REGULATIONS AS OF THE APPROVAL OATE, HOWEVER, THIS APPROVAL IS SUBJECT TO CHANGES IN SUCH LAWS AND REGULATIONS. CHANGES IN TOPOGRAPHY OR SITE OESIGNATIONS MAY VOID THIS APPROVAL.





TAX MAP 44 PARCEL 294 SCALE 1" = 2000' TAX ID NO. 01012185

APPROVED FOR RECORDING FOR THE PLANNING COMMISSION

OAVIO K. HUMPHREYS, SECRETARY

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY THAT THE PLAN SHOWN HEREON IS CORRECT; THAT IT IS THE SUBOIN—SION OF THE LAND CONVEYED BY CALVERT MARINA, LLC TO. CG—SOLOMON'S MARINA, LLC BY OEEO OATED , 2007 AND RECORDED AMONG THE LAND RECORDS OF CALVERT COUNTY, MARYLAND IN LIBER K.P.S. AT FOLIO .

PERMANENT MONUMENTS AND METAL RODS OR PIPES HAVE BEEN SET AS REQUIRED BY ARTICLE 7-1.08.E OF THE CALVERT COUNTY ZONING ORDINANCE AND SECTION 3-108, REAL PROPERTY ARTICLE OF THE ANNOTATED CODE OF MARYLANO.

REGISTERED SURVEYOR

NOTIFICATION OF COVENANTS

PRIOR TO SETTLEMENT, ALL PURCHASERS OF LOTS ARE TO BE FULLY INFORMED OF THE EXISTENCE OF COVENANTS. THE EXTENT OF COMMON AREAS AND FACILITIES, AND THE RESPON-SIBILITIES OF EACH HOMEOWNER TO PARTICIPATE IN THE COSTS AND MAINTENANCE OF THE COMMON AREAS AND FACILITIES.

OWNER: STEPHEN A. ECKERT, MANAGING MEMBER CG-SOLOMON'S MARINA, LLC

OWNER'S CERTIFICATION

WE, THE UNDERSIGNED OWNERS AND ALL PARTIES HAVING PROPRIETARY INTEREST IN THIS PROPERTY HEREBY ADOPT THIS PLAN OF SUBDIVISION, ESTABLISH THE MINIMUM BUILDING RESTRICTION LINES AND OEDICATE THE STREETS, ALLEYS, WALKS AND OTHER AREAS AS SPECIFIED. THE STREETS, ROADS, OPEN SPACES AND PUBLIC SITES SHOWN HEREON AND THE MENTION THEREOF IN DEEDS ARE FOR THE PURPOSE OF DESCRIPTION ONLY AND RECORDING OF THE FINAL PLAT SHALL NOT BE DEEMED TO CONSTITUTE OR EFFECT AN ACCEPTANCE BY THE COUNTY COMMISSIONERS. ACCEPTANCE BY THE COUNTY MAY BE ACCOMPLISHED BY A

A UTILITY EASEMENT IS ESTABLISHED TEN FEET IN MOTH, BINDING ON ALL RIGHT-OF-WAYS FOR THE INSTALLATION AND MAINTENANCE OF PUBLIC UTILITIES. ALL UTILITIES INCLUDING GAS, ELECTRIC AND COMMUNICATION SHALL BE INSTALLED UNDERGROUND IN ACCORDANCE WITH THE PUBLIC SERVICE COMMISSION ORDER NO. 60316. THE TELEPHONE COMPANY MAY REQUIRE A PRE-CONSTRUCTION REFUNDABLE DEPOSIT IN ACCORDANCE WITH PARAGRAPH 7 OF THAT ORDER

WE HEREBY CERTIFY THAT TO THE BEST OF OUR KNOWLEDGE, THE REQUIREMENTS OF SECTION 3—108, REAL PROPERTY ARTICLE OF THE ANNOTATED CODE OF MARYLAND, 1974 EDITION, AS CURRENTLY AMENOED, AS FAR AS THEY RELATE TO THE MAKING OF THIS PLAT

WINESS

OWNER: STEPHEN A. ECKERT, MANAGING MEMBER
CG-SOLOMON'S MARINA, LLC 8120 WOODMONT AVENUE BETHESDA, MO 20814

PLAT SIXTEEN

LOTS 224 THROUGH 235, CREEK VIEW DRIVE, ADMIRAL HEWITT DRIVE AND AWEIGH PLACE

THE HARBOURS AT SOLOMONS

LOCATED IN DOWELL

FIRST DISTRICT, CALVERT COUNTY, MARYLAND PLANNING AND ZONING CASE NO. SD 02-08A



PLAT TWELVE

SOLOMONS

COLLINSON, OLIFF & ASSOCIATES, INC.

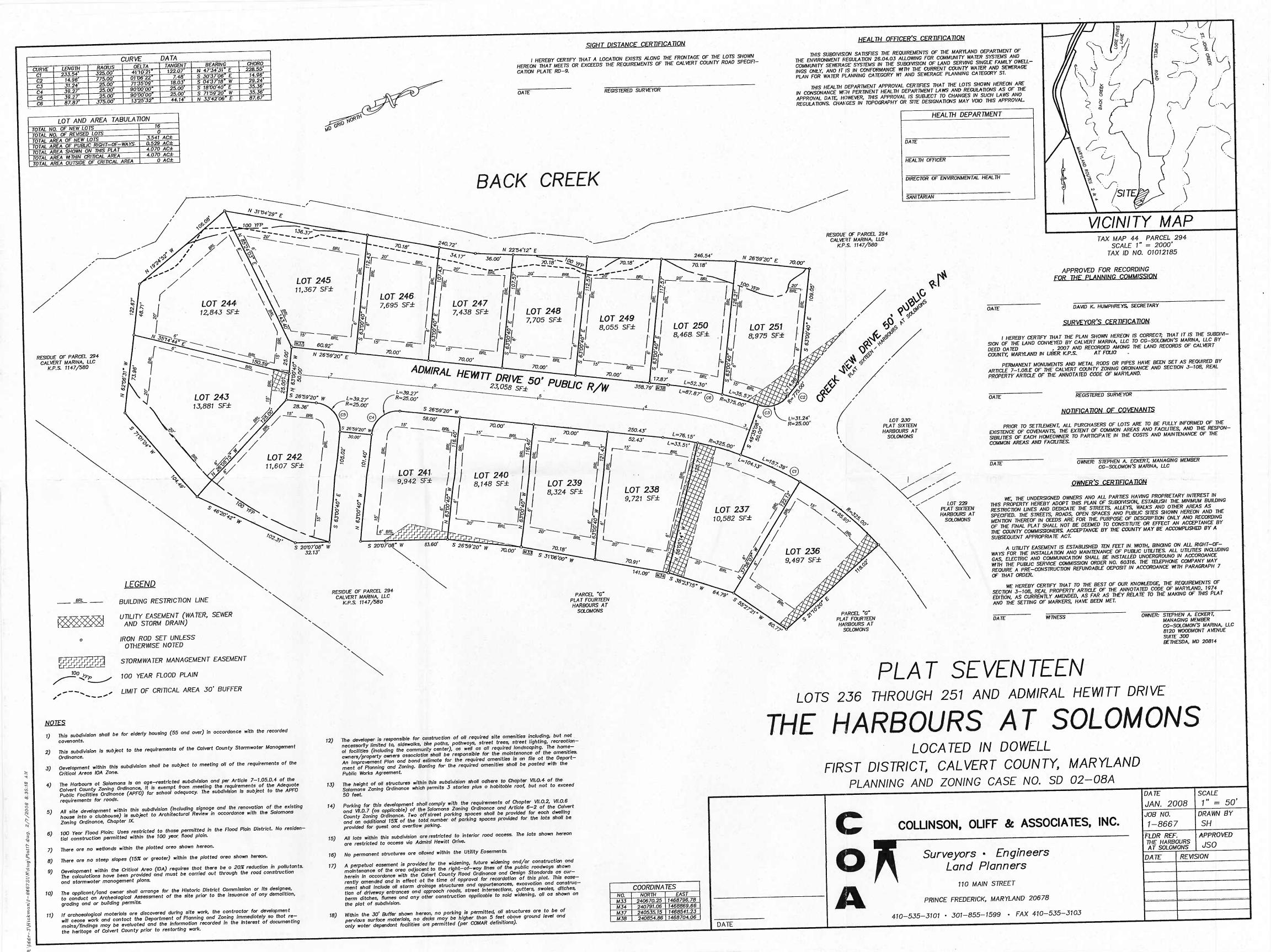
Surveyors • Engineers Land Planners

110 MAIN STREET

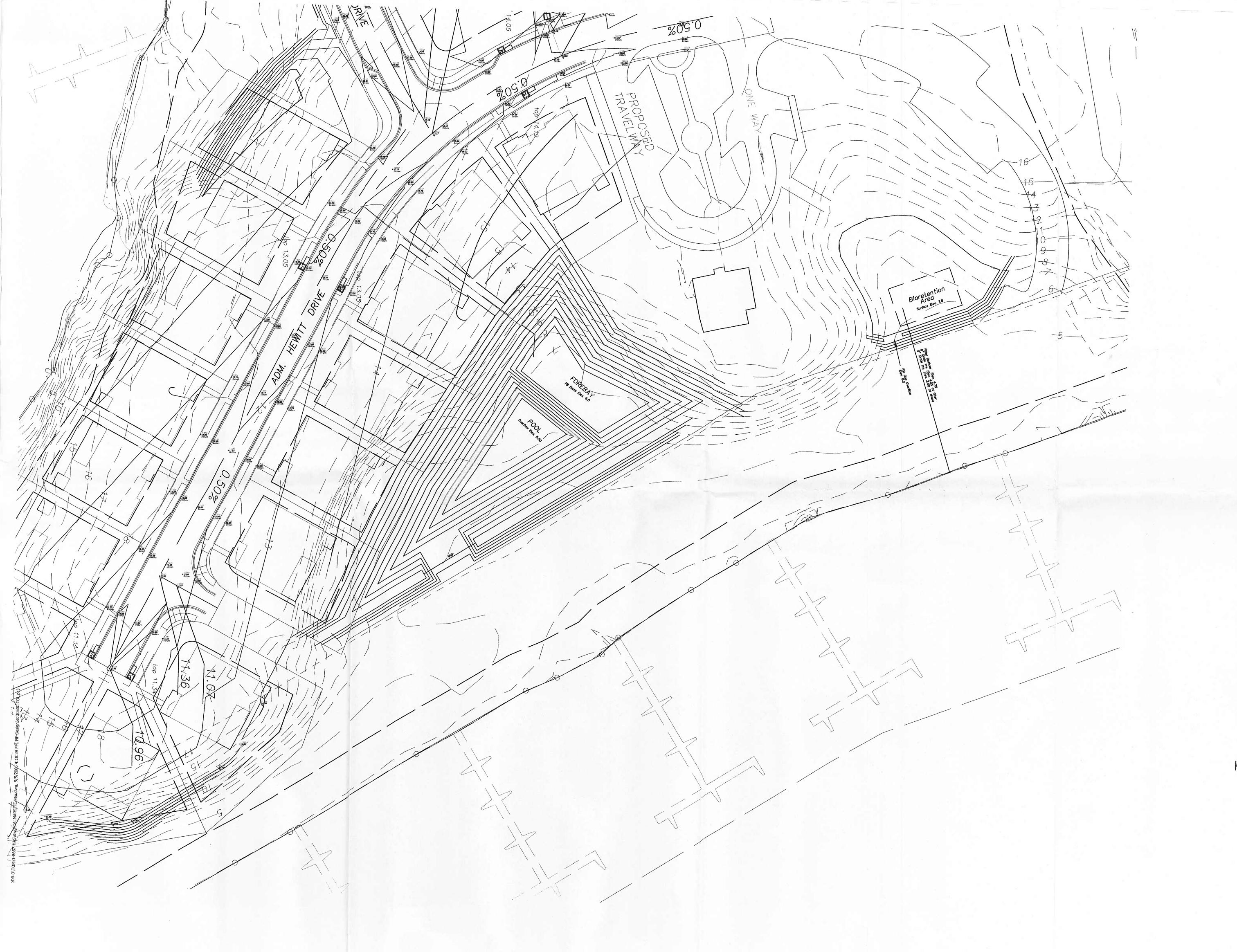
PRINCE FREDERICK, MARYLAND 20678

410-535-3101 · 301-855-1599 · FAX 410-535-3103

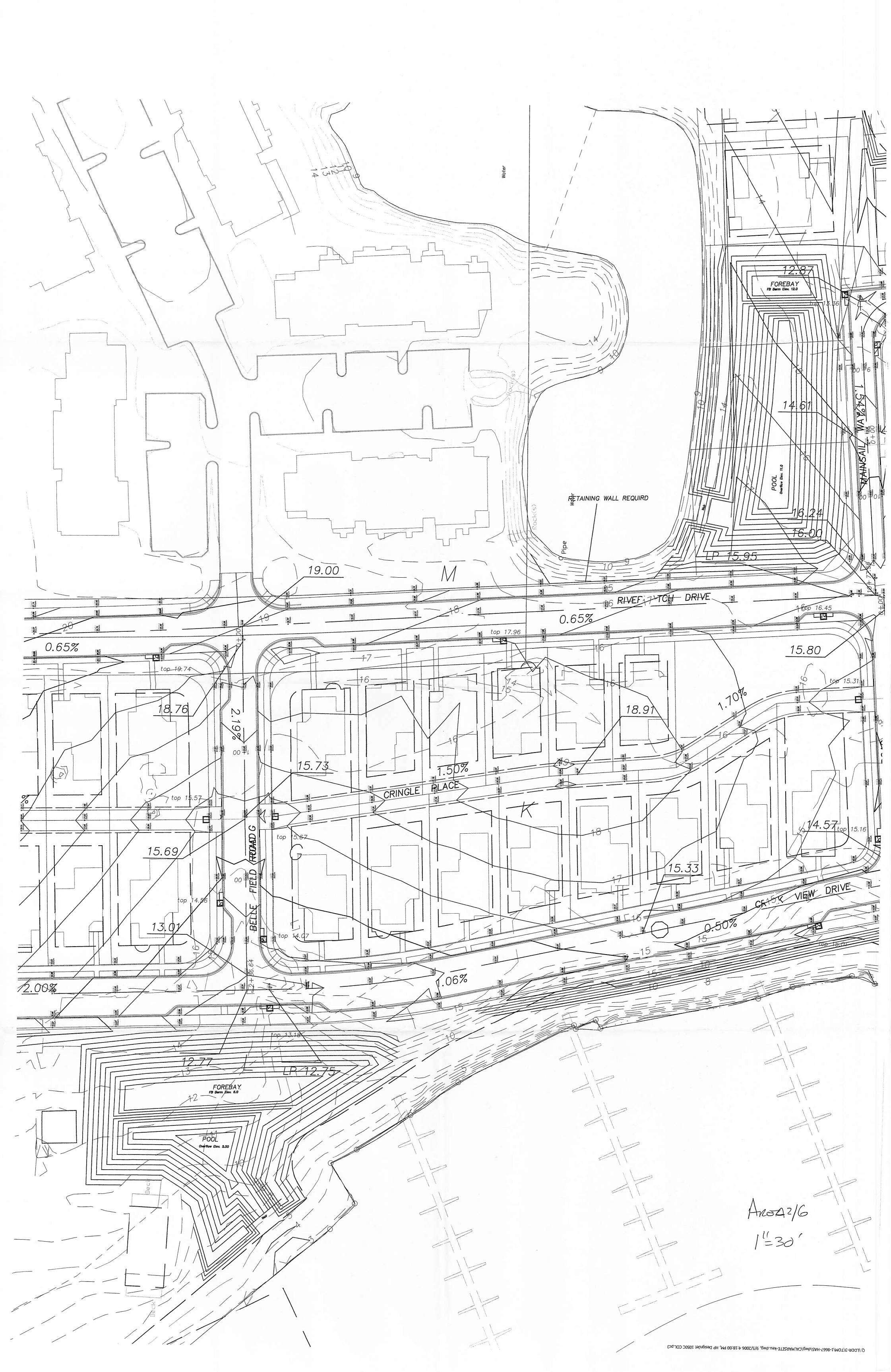
DATE		SCALE	
JAN. 20	08	1" = 50	
JOB NO.		DRAWN BY	
1-8667		SH	
FLDR REF.			
AT SOLOMO	THE HARBOURS AT SOLOMONS		
DATE	REVIS	SION	
- 0			



MSA-5-1829-5657



Anore 3 = 4 / 5



CA 589-02

	Frederick, MD			Date: 6-21-06	OF TRANSMITTAL Job Number: 1-8667
Phone	(410) 535-310	$01 \sim (301)$	355-1599	Attention: Mary Owens	1 5 - 10 0 TALL 10 10 1 TALL
	0-535-3103 kulrich@coain	0 00m	en littles	RE: The Harbours at Solomo	ons .
Linaii.	diricii@coaiii	IC.COIII			
	apeake Bay C nission	critical Area			
Ve are se	ending you:		Attached	Under Separa	ate Cover
	Prints		Letter/ Memo	Speci	fications
Comm	ents/Respons	se [Plans- Origir	nals	: SWM Study
Copies	Number	Date		Descr	iption
			Stormwater I	Management Study	iptivii
				% Rule Calculations	
hese are	transmitted				
For ap			For your use		
_	view and com uested	ment L	Approved as		
7 valed	uesteu	L	Returned for	corrections	
emarks:					

File

Please Notify us at once if Enclosures are not as noted

JUN 2 2 2006

RECEIVED

· Does the County ordinance allow for fee-in-lieu adjection win the BEA?

· credit for existing forest + plantable area made red (in 100-foot outfer) and credit for any plantings in Buffer outside of red line

PO Box 2209

Prince Frederick, MD 20678

Phone: 410-535-3101 • 301-855-1599

Fax: 410-535-3103

Email: kulrich@coainc.com

Memo

To:

Chesapeake Bay Critical Area Commission

Attre

Mary Owens

From:

Keith E. Ulrich, COA Project Manager

CC:

File

Date:

June 26, 2006

Project:

Harbours at Solomons

Re:

20% Rule Calculation

Mary,

Attatched please find revised 20% rule Calculations with the pollutant loadings treated to zero. The previous numbers did not take into account zeroing out the loadings.

Any questions give me a call.

RECEIVED

JUN 28 2006

CRITICAL AREA COMMISSION

Surveyors ~ Engineers ~ Land Planners 288 Merrimac Court

Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: LOCATION: Sol. Harbour Dowell Rd

JOB #:

Area 1 1-8667

NEW DEVELOPMENT

STEP 1:

Estimate parameters.

		Pr	e - Dev.		Pos	st - Dev.
A (Total area	a)	=	36.32	acres	36.32	acres
la:	Bldg.	=	0.25	acres	8.01	acres
	Pave	=	1.37	acres	6.23	acres
	Alleys	=	0.00	acres	1.61	acres
	Conc.	=	1.84	acres	0.00	acres
	Sidewll	<=	0.00	acres	2.24	acres
	Gravel	=	1.35	acres	0.00	acres
	Drives	Ξ	0.00	acres	1.82	acres
	Total	=	4.81	acres	19.91	acres
I= (Ia Tot / A	.)	=	13%		55%	

Rv=0.05+0.009*I 0.17

0.3 mg/l

0.3 mg/l

0.55

STEP 2: Calculate the pre-development load (L pre).

L post

L pre 0.5 x A

STEP 3: Calculate the post-development load (L post).

 $[(Rv \times C \times A \times 8.16)]$

48.9 lbs./year

18.2 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR L post - (0.8 * L pre)

34.3 lbs.

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED	REMOVAL		FRACTION		L post		LOA	D	RR	
BMP	EFFICIENCY	X	D. A.	Х		=	REMO\	/ED	Balan	ce
OPTION	- %		SERVED		(STEP 3)		lbs.	lbs.		
Multi Pond	65%	X	100.0%	х	48.9	=	31.8	lbs.	2.5	lbs.
Storm Filter	50%	X	10.1%	×	48.9	=	2.5	lbs.	0.0	lbs.
		X		х		=		lbs.	0.0	lbs.
		X		х		=		lbs.	0.0	lbs.
		X		х		=		lbs.	0.0	lbs.
		Х		Х		=		lbs.	0.0	lbs.

Offset Requried

and to preside have been continued to the continue of the cont

RECEIVED

JUN 28 2006

CRITICAL AREA COMMISSION

0.0 lbs.

Surveyors ~ Engineers ~ Land Planners 288 Merrimac Court

Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: LOCATION: Sol. Harbour Dowell Rd

JOB #:

Area 1 1-8667

NEW DEVELOPMENT

STEP 1:

Estimate parameters.

		<u>P</u>	re - Dev.	l .	Pos	st - Dev.
A (Total are	a)	=	36.32	acres	36.32	acres
la:	Bldg.	=	0.25	acres	8.01	acres
	Pave	=	1.37	acres	6.23	acres
	Alleys	=	0.00	acres	1.61	acres
	Conc.	=	1.84	acres	0.00	acres
Sidew		<=	0.00	acres	2.24	acres
	Gravel	=	1.35	acres	0.00	acres
	Drives	Ξ	0.00	acres	1.82	acres
	Total	=	4.81	acres	19.91	acres
I= (Ia Tot / A	A)	=	13%		55%	
Rv=0.05+0.	009*I	=	0.17		0.55	
C:		=	0.3	mg/l	0.3	mg/l

STEP 2: Calculate the pre-development load (L pre).

L pre 0.5 x A

18.2 lbs./year

JUN 28 2006

CRITICAL AREA COMMISSION

RECEIVED

STEP 3: Calculate the post-development load (L post).

L post [(Rv x C x A x 8.16)]

48.9 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR L post - (0.8 * L pre)

34.3 lbs.

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED BMP OPTION	REMOVAL FRACTION EFFICIENCY X D. A. % SERVED		х	- 1		= LOAD REMOVED		RR Balance lbs.		
OI HON	70		SLIVED		(SIEF 3)	_	105.		IDS	
Multi Pond	65%	Х	100.0%	x	48.9	=	31.8	lbs.	2.5	lbs.
Storm Filter	50%	х	10.1%	x	48.9	=	2.5	lbs.	0.0	lbs.
		X		x		=		lbs.	0.0	lbs.
		x		x		=		lbs.	0.0	lbs.
		X		x		=		lbs.	0.0	lbs.
		Х		х		=		lbs.	0.0	lbs.

Offset Requried 0.0 lbs.

^{**} If the LOAD REMOVED is equal or greater than the pollutant removal requirement (RR) calculated in STEP 4, then the on-site BMP options(s) comply with the Critical Area 10% Rule.

use BMPs in a perior calculations

Collinson, Oliff Associates, Inc.

Surveyors ~ Engineers ~ Land Planners 288 Merrimac Court

Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: Sol. Harbour
LOCATION: Dowell Rd
Area 2
JOB #: 1-8667

RE-DEVELOPMENT

STEP 1: Estimate parameters.

		Po	st - Dev.			
A (Total a	rea)	=	5.08	acres	5.08	acres
la:	Bldg.	=	0.01	acres	0.94	acres
	Pave	=	0.46	acres	0.99	acres
	Alleys	=	0.00	acres	0.20	acres
	Conc.	=	0.09	acres	0.00	acres
	Sidewl	<=	0.00	acres	0.43	acres
	Gravel	=	0.40	acres	0.00	acres
	Drives	Ξ	0.00	acres	0.17	acres
	Total	=	0.96	acres	2.73	acres

I= (Ia Tot / A) = 19% 54% Rv=0.05+0.009*I = 0.22 0.54 C: = 0.3 mg/I 0.3 mg/I

STEP 2: Calculate the pre-development load (L pre).

L pre = $[(Rv \times C \times A \times 8.16)]$

= 2.7 lbs./year

STEP 3: Calculate the post-development load (L post).

L post = $[(Rv \times C \times A \times 8.16)]$

6.7 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR = L post - (0.8 * L pre)

4.5 lbs.

STEP 5: Select BMP options using the screening tools and list them below.

Then calculate the load removal for each option.

SELECTED	REMOVAL		FRACTION		L post		LOA	D	RR	1
BMP	EFFICIENCY	X	D. A.	Х		=	REMO	√ED	Balar	nce
OPTION	%		SERVED		(STEP 3)		lbs.		lbs	
Surface Sand Filter	60%	x C	100.0%	×	6.7	=	4.0	lbs.	0.5	lbs.
Storm Filter	50%	x	14.0%	\rangle_{x}	6.7	=	0.5	lbs.	0.0	lbs.
		Х		х		=		lbs.	0.0	lbs.
		X		X		=		lbs.	0.0	lbs.
		Х		Х		=		lbs.	0.0	lbs.
		Х		Х		=		lbs.	0.0	lbs.

Offset Required = 0.0 lbs.

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Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: LOCATION:

Sol. Harbour Dowell Rd

JOB #:

Area 2 1-8667

RE-DEVELOPMENT

STEP 1:

Estimate parameters.

		Pre	- Dev		Pos	st - Dev.
A (Total area	a)	=	5.08	acres	5.08	acres
la:	Bldg.	=	0.01	acres	0.94	acres
	Pave	=	0.46	acres	0.99	acres
	Alleys	=	0.00	acres	0.20	acres
	Conc.	=	0.09	acres	0.00	acres
	Sidewl	<=	0.00	acres	0.43	acres
	Gravel	=	0.40	acres	0.00	acres
	Drives	Ξ	0.00	acres	0.17	acres
	Total	=	0.96	acres	2.73	acres
I= (Ia Tot / A)	=	19%		54%	
Rv=0.05+0.0	09*1	=	0.22		0.54	
C:		=	0.3	mg/l	0.3	mg/l

STEP 2: Calculate the pre-development load (L pre).

L pre = $[(Rv \times C \times A \times 8.16)]$

= 2.7 lbs./year

STEP 3: Calculate the post-development load (L post).

L post = $[(Rv \times C \times A \times 8.16)]$

[(140 × 0 × 77 × 0.10)]

6.7 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR = L post - (0.8 * L pre)

=

4.5 lbs.

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED	REMOVAL		FRACTION		L post		LOA	D	RR	2
BMP OPTION	EFFICIENCY %	Х	D. A. SERVED	Х	(STEP 3)	=	REMOVED lbs.		Balance lbs.	
Surface Sand Filter	60%	x	100.0%	x	6.7	=	4.0	lbs.	0.5	lbs.
Storm Filter	50%	X	14.0%	×	6.7	=	0.5	lbs.	0.0	lbs.
		X		X		=		lbs.	0.0	lbs.
		X		X		=		lbs.	0.0	lbs.
		X		X		=		lbs.	0.0	lbs.
		Χ		X		=		lbs.	0.0	lbs.

Offset Requried = 0.0 lbs.

BMPS perils

Collinson, Oliff Associates, Inc.

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Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: LOCATION:

Sol. Harbour Dowell Rd

JOB #:

Area 3 1-8667

RE-DEVELOPMENT

STEP 1:

Estimate parameters.

	Pre	- Dev		Pos	st - Dev
A (Total area)	=	10.76	acres	10.76	acres
la: Bldg.	=	0.03	acres	1.53	acres
Pave	=	0.04	acres	2.06	acres
Alleys	=	0.00	acres	0.42	acres
Conc.	=	0.58	acres	0.00	acres
Sidewl	<=	0.00	acres	0.89	acres
Gravel	=	1.25	acres	0.00	acres
Drives	=	0.00	acres	0.57	acres
Total	=	1.90	acres	5.47	acres
I= (Ia Tot / A)	=	18%		51%	
Rv=0.05+0.009*I	=	0.21		0.51	
C:	=	0.3	mg/l	0.3	mg/l

STEP 2: Calculate the pre-development load (L pre).

L pre = $[(Rv \times C \times A \times 8.16)]$

=

5.5 lbs./year

STEP 3: Calculate the post-development load (L post).

L post = $[(Rv \times C \times A \times 8.16)]$

=

13.4 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR = L post - (0.8 * L pre)

=

9.0 lbs.

STEP 5: Select BMP options using the screening tools and list them below.

Then calculate the load removal for each option.

SELECTED	REMOVAL		FRACTION		L post		LOA	D	RR	}
BMP OPTION			D. A. SERVED	X (STEP 3)		=	REMOVED lbs.		Balance lbs.	
Wet ED Pond	60%	x	100.0%	х	13.4	=	8.0	lbs.	1.0	lbs.
Storm Fileter	50%	х	14.0%	х	13.4	=	0.9	lbs.	0.0	lbs.
		х		X		=		lbs.	0.0	lbs.
		X		х		=		lbs.	0.0	lbs.
		X		х		=		lbs.	0.0	lbs.
		Х		Х		=		lbs.	0.0	lbs.

Offset Requried = 0.0 lbs.

^{**} If the LOAD REMOVED is equal or greater than the pollutant removal requirement (RR) calculated in STEP 4, then the on-site BMP options(s) comply with the Critical Area 10% Rule.

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Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: LOCATION: Sol. Harbour Dowell Rd

JOB #:

Area 3 1-8667

RE-DEVELOPMENT

STEP 1:

Estimate parameters.

		Pr	e - Dev.		Pos	st - Dev
A (Total area)	=	10.76	acres	10.76	acres
la:	Bldg.	=	0.03	acres	1.53	acres
	Pave	=	0.04	acres	2.06	acres
	Alleys	=	0.00	acres	0.42	acres
	Conc.	=	0.58	acres	0.00	acres
Sidew		=	0.00	acres	0.89	acres
	Gravel	=	1.25	acres	0.00	acres
	Drives	Ξ	0.00	acres	0.57	acres
	Total	=	1.90	acres	5.47	acres
In /In Tak / A)			400/		5404	
I= (Ia Tot / A)		=	18%		51%	
Rv=0.05+0.0	09*1	=	0.21		0.51	
C:		=	0.3	mg/l	0.3	mg/l

STEP 2: Calculate the pre-development load (L pre).

L pre [(Rv x C x A x 8.16)]

5.5 lbs./year

STEP 3: Calculate the post-development load (L. post).

L post [(Rv x C x A x 8.16)]

13.4 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR L post - (0.8 * L pre)

9.0 lbs.

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED	REMOVAL	IOVAL FRACTION		L post		LOAD		RR	1	
BMP OPTION	EFFICIENCY %	Х	D. A. X SERVED		(STEP 3)	=	REMOVED lbs.		Balance lbs.	
Wet ED Pond	60%	X	100.0%	X	13.4	=	8.0	lbs.	1.0	lbs.
Storm Fileter	50%	X	14.0%	X	13.4	=	0.9	lbs.	0.0	lbs.
		Χ		X		=		lbs.	0.0	lbs.
		X		X		L=		lbs.	0.0	lbs.
		X		X		=		lbs.	0.0	lbs.
		X		X		=		lbs.	0.0	lbs.

Offset Requried 0.0 lbs.

^{**} If the LOAD REMOVED is equal or greater than the pollutant removal requirement (RR) calculated in STEP 4, then the on-site BMP options(s) comply with the Critical Area 10% Rule.

Surveyors ~ Engineers ~ Land Planners 288 Merrimac Court

Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: LOCATION: Sol. Harbour Dowell Rd

JOB #:

Area 4 1-8667

RE-DEVELOPMENT

STEP 1:

Estimate parameters.

	Pre - Dev.							
A (Total area	a)	=	6.15	acres		6.15	acres	
la:	Bldg.	=	0.04	acres		1.31	acres	
	Pave	=	0.00	acres		0.84	acres	
	Alleys	=	0.00	acres		0.00	acres	
	Conc.	=	0.08	acres		0.00	acres	
	Sidewlk	=	0.00	acres		0.26	acres	
	Gravel	=	0.81	acres		0.00	acres	
	Drives	Ξ	0.00	acres		0.22	acres	
	Total	=	0.93	acres		2.63	acres	
I= (la Tot / A)	=	15%			43%		
Rv=0.05+0.0	09*1	=	0.19			0.44		
C:		=	0.3	mg/l		0.3	mg/l	

STEP 2: Calculate the pre-development load (L pre).

 $[(Rv \times C \times A \times 8.16)]$

2.9 lbs./year

STEP 3: Calculate the post-development load (L post).

L post $[(Rv \times C \times A \times 8.16)]$

6.6 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR L post - (0.8 * L pre)

4.3 lbs.

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED	REMOVAL		FRACTION		L post		LOA	D	RF	?
BMP	EFFICIENCY	X	D. A.	X		=	REMO	VED	Balar	nce
OPTION	%		SERVED		(STEP 3)		lbs.		lbs	
Wet ED Pond	60%	х	100.0%	X	6.6	=	4.0	lbs.	0.3	lbs.
Storm Filter	50%	X	10.0%	Х	6.6	=	0.3	lbs.	0.0	lbs.
		Х		х		=		lbs.	0.0	lbs.
		Х		Х		=		lbs.	0.0	lbs.
		Х		Х		=		lbs.	0.0	lbs.
4		Х		Х		=	_	lbs.	0.0	lbs.

Offset Requried 0.0 lbs.

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Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: LOCATION:

Sol. Harbour Dowell Rd

JOB #:

Area 4 1-8667

RE-DEVELOPMENT

STEP 1:

Estimate parameters.

	Pr	e - Dev.	Post - Dev.
A (Total area)	=	6.15 acres	6.15 acres
la: Bldg.	=	0.04 acres	1.31 acres
Pave	=	0.00 acres	0.84 acres
Alleys	=	0.00 acres	0.00 acres
Conc.	=	0.08 acres	0.00 acres
Sidewl	k =	0.00 acres	0.26 acres
Gravel	=	0.81 acres	0.00 acres
<u>Drives</u>	Ξ	0.00 acres	0.22 acres
Total	=	0.93 acres	2.63 acres
I= (Ia Tot / A)	=	15%	43%
Rv=0.05+0.009*I	=	0.19	0.44
C:	=	0.3 mg/l	0.3 mg/l

STEP 2: Calculate the pre-development load (L pre).

L pre = $[(Rv \times C \times A \times 8.16)]$

= 2.9 lbs./year

STEP 3: Calculate the post-development load (L post).

L post = $[(Rv \times C \times A \times 8.16)]$

= 6.6 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR = L post - (0.8 * L pre)

4.3 lbs.

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED	REMOVAL	FRACTION		L post		LOAD		RR	}	
BMP OPTION	EFFICIENCY %	X	X D. A. X SERVED		(STEP 3)	=	REMOVED lbs.		Balance lbs.	
Wet ED Pond	60%	х	100.0%	х	6.6	=	4.0	lbs.	0.3	lbs.
Storm Filter	50%	X	10.0%	x	6.6	=	0.3	lbs.	0.0	lbs.
		X		х		=		lbs.	0.0	lbs.
		X		х		=		lbs.	0.0	lbs.
		Χ		х		=		lbs.	0.0	lbs.
		Х		х		=		lbs.	0.0	lbs.

Offset Requried = 0.0 lbs.

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Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: LOCATION:

Sol. Harbour Dowell Rd

JOB#:

Area 5 1-8667

RE-DEVELOPMENT

STEP 1:

Estimate parameters.

	Pre - Dev.							st - Dev
A (Total ar	ea)	=	4.62	acres			4.62	acres
la:	Bldg.	=	0.03	acres			0.04	acres
	Pave	=	0.00	acres			1.07	acres
	Alleys	=	0.00	acres			0.00	acres
	Conc.		0.06	acres			0.00	acres
	Sidewl	<=	0.00	acres			0.16	acres
	Gravel	E =	0.85	acres			0.00	acres
	Drives	Ξ	0.00	acres			0.00	acres
	Total	=	0.94	acres			1.27	acres
I= (la Tot /	A)	1	20%				27%	
Rv=0.05+0	0.009*1	=	0.23				0.29	
C:		=	0.3	mg/l			0.3	mg/I

STEP 2: Calculate the pre-development load (L pre).

L pre = $[(Rv \times C \times A \times 8.16)]$

= 2.6 lbs./year

STEP 3: Calculate the post-development load (L post).

L post = $[(Rv \times C \times A \times 8.16)]$

= 3.3 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR = L post - (0.8 * L pre)

= 1.2 lbs.

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED	REMOVAL	FRACTION		L post		LOAI)	RR		
BMP	EFFICIENCY	X	D. A.	X		222	REMOV	/ED	Balan	ice
OPTION	%		SERVED		(STEP 3)		lbs.		lbs	
Infiltration	65%	X	55.0%	х	3.3	=	1.2	lbs.	0.0	lbs.
		X		х		=		lbs.	0.0	lbs.
		X		Х		=		lbs.	0.0	lbs.
		X		Х		=		lbs.	0.0	lbs.
		X		x		=		lbs.	0.0	lbs.
		Х		х		=		lbs.	0.0	lbs.

Offset Requried = 0.0 lbs.

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Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: LOCATION:

Sol. Harbour Dowell Rd

JOB#:

Area 6 1-8667

NEW DEVELOPMENT

STEP 1:

Estimate parameters.

		P	re - Dev.	l.	Pos	st - Dev
A (Total are	ea)	=	10.66	acres	10.66	acres
la:	Bldg.	=	0.03	acres	2.15	acres
	Pave	=	0.00	acres	0.91	acres
	Alleys	=	0.00	acres	0.20	acres
	Conc.	=	0.32	acres	0.00	acres
	Sidewll	k =	0.00	acres	0.27	acres
	Gravel	=	0.14	acres	0.00	acres
	Drives	Ξ	0.00	acres	0.23	acres
	Total	=	0.49	acres	3.76	acres
I= (Ia Tot /	A)	=	5%		35%	
Rv=0.05+0	.009*I	=	0.10		0.37	
C:		=	0.3	mg/l	0.3	mg/l

in a suice

STEP 2: Calculate the pre-development load (L pre).

L pre = $0.5 \times A$

=

5.3 lbs./year

STEP 3: Calculate the post-development load (L post).

L post =

 $[(Rv \times C \times A \times 8.16)]$

9.7 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR

L post - (0.8 * L pre)

=

5.5 lbs.

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED	REMOVAL		FRACTION		L post		LOA	D	RR	₹
BMP OPTION	EFFICIENCY %			Х	X (STEP 3)		REMOVED lbs.		Balance lbs.	
Bio Retention Area	50%	Х	100.0%	Х	9.7	=	4.9	lbs.	0.7	lbs
Storm Filter	50%	X	13.0%	Х	9.7	=	0.6	lbs.	0.0	lbs
		Χ		X		=		lbs.	0.0	lbs
		Χ		Х		=		lbs.	0.0	lbs
		Χ		X		=		lbs.	0.0	lbs
		X		X		=		lbs.	0.0	lbs

Offset Required = 0.0 lbs.

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Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: LOCATION:

Sol. Harbour Dowell Rd Area 6

JOB #:

1-8667

NEW DEVELOPMENT

STEP 1:

Estimate parameters.

		Pos	st - Dev.			
A (Total	area)	=	10.66	acres	10.66	acres
la:	Bldg.	=	0.03	acres	2.15	acres
	Pave	=	0.00	acres	0.91	acres
	Alleys	=	0.00	acres	0.20	acres
	Conc.	=	0.32	acres	0.00	acres
	Sidewill	(=	0.00	acres	0.27	acres
	Gravel	=	0.14	acres	0.00	acres
	Drives	Ξ	0.00	acres	0.23	acres
	Total	=	0.49	acres	3.76	acres
l= (la To	ot / A)	=	5%		35%	
Rv=0.05	5+0.009*1	=	0.10		0.37	
C:		=	0.3	mg/l	0.3	mg/l

STEP 2: Calculate the pre-development load (L pre).

L pre = $0.5 \times A$

=

5.3 lbs./year

STEP 3: Calculate the post-development load (L post).

L post = $[(Rv \times C \times A \times 8.16)]$

=

9.7 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR = L post - (0.8 * L pre)

==

5.5 lbs

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED	REMOVAL	FRACTION		L post		LOA	D	RR	\	
ВМР	EFFICIENCY	X	D. A.	X		=	REMO'	√ED	Balan	nce
OPTION	%		SERVED		(STEP 3)		lbs		lbs	
Bio Retention Area	50%	X	100.0%	х	9.7	=	4.9	lbs.	0.7	lbs.
Storm Filter	50%	X	13.0%	x	9.7	=	0.6	lbs.	0.0	lbs.
		X		х		=		lbs.	0.0	lbs
		X		х		=		lbs.	0.0	lbs
		X		х		=		lbs.	0.0	lbs
		Х		х		=		lbs.	0.0	lbs

Offset Requried = 0.0 lbs.

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Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: LOCATION: Sol. Harbour Dowell Rd

JOB #:

Area 7 1-8667

RE-DEVELOPMENT

STEP 1:

Estimate parameters.

		Pre			Pos	st - Dev.	
A (Total are	a)	=	8.87	acres		8.87	acres
la:	Bldg.	=	0.21	acres		0.17	acres
	Pave	=	0.00	acres		1.97	acres
	Alleys	=	0.00	acres		0.00	acres
	Conc.	=	0.28	acres		0.00	acres
	Sidewlk	=	0.00	acres		0.00	acres
	Gravel	=	1.86	acres		0.00	acres
	Drives	Ξ	0.00	acres		0.00	acres
	Total	=	2.35	acres		2.14	acres
I= (Ia Tot / A	A)	=	26%			24%	
Rv=0.05+0.	009*I	=	0.28			0.27	
C:		=	0.3	mg/l		0.3	mg/l

STEP 2: Calculate the pre-development load (L pre).

L pre $[(Rv \times C \times A \times 8.16)]$

6.1 lbs./year

STEP 3: Calculate the post-development load (L post).

[(Rv x C x A x 8.16)] L post

5.9 lbs./year

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STEP 4: Calculate the pollutant removal requirement (RR).

RR L post - (0.8 * L pre)

1.0 lbs.

CRITICAL AREA COMMISSION

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED	REMOVAL		FRACTION		L post		LOAD	F	RR
BMP OPTION	EFFICIENCY %	Х	D. A. SERVED	Х	(STEP 3)	=	REMOVED lbs.		ance
Bioretention Area	50%	X	33.0%	X	5.9	=	1.0 lb:	s. 0.0	lbs.
		X		X		=	lb:	s. 0.0	lbs.
		X		X		=	lb	0.0	lbs.
		X		Х		=	lb	s. 0.0	lbs.
		X		X		=	lb	0.0	ibs.
		X		X		=	lb:	s. 0.0	lbs.

Offset Requried 0.0 lbs.

^{**} If the LOAD REMOVED is equal or greater than the pollutant removal requirement (RR) calculated in STEP 4, then the on-site BMP options(s) comply with the Critical Area 10% Rule.

Appendix B BMP Code

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CRITICAL AREA COMMISSION

Keystone Phosphorus Removal Rates							
Code	BMP List	TP%	Comments				
P-1	Micropool ED	40%					
P-2	Wet Pond	50%					
P-3	Wet ED Pond	60%	****				
P-4	Multiple Pond	65%					
P-5	Pocket Pond	50%					
W-1	Shallow Wetland	40%					
W-2	ED Wetland	40%					
W-3	Pond / Wetland	55%					
W-4	Pocket Wetland	40%					
1-1	Infiltration Trench	65%					
I - 2	Infiltration Basin	65%					
F-1	Surface Sand Filter	50%					
F-2	Underground Sand Filter	50%	Storm Filter				
F-3	Perimeter Sand Filter	50%					
F-4	Organic Filter	50%					
F-5	Pocket Sand Filter	40%					
F-6	Bioretention	50%					
0-1	Dry Swale	65%					
O-2	Wet Swale	40%					

.

•

Table D.4.7 Updated Critical Area Keystone Phosphorous Removal Rates

CODE	BMP LIST	TP%
P-1	Micropool ED	40
P-2	Wet Pond	50
P-3	Wet ED Pond	60
P-4	Multiple Pond	65
P-5	Pocket Pond	50
W-1	Shallow Wetland	40
W-2	ED Wetland	40
W-3	Pond/Wetland	55
W-4	Pocket Wetland	40
1-1	Infiltration Trench	65
1-2	Infiltration Basin	65
F-1	Surface Sand Filter	50
F-2	Underground Sand Filter	50
F-3	Perimeter Sand Filter	50
F-4	Organic Filter	50
F-5	Pocket Sand Filter	40
F-6	Bioretention	50
O-1	Dry Swale	65
O-2	Wet Swale	40

. Storm Filter





RECORDING OF PLAT CALVERT COUNTY MD

(SUBDIVISION) CIRCUIT COURT CLERK

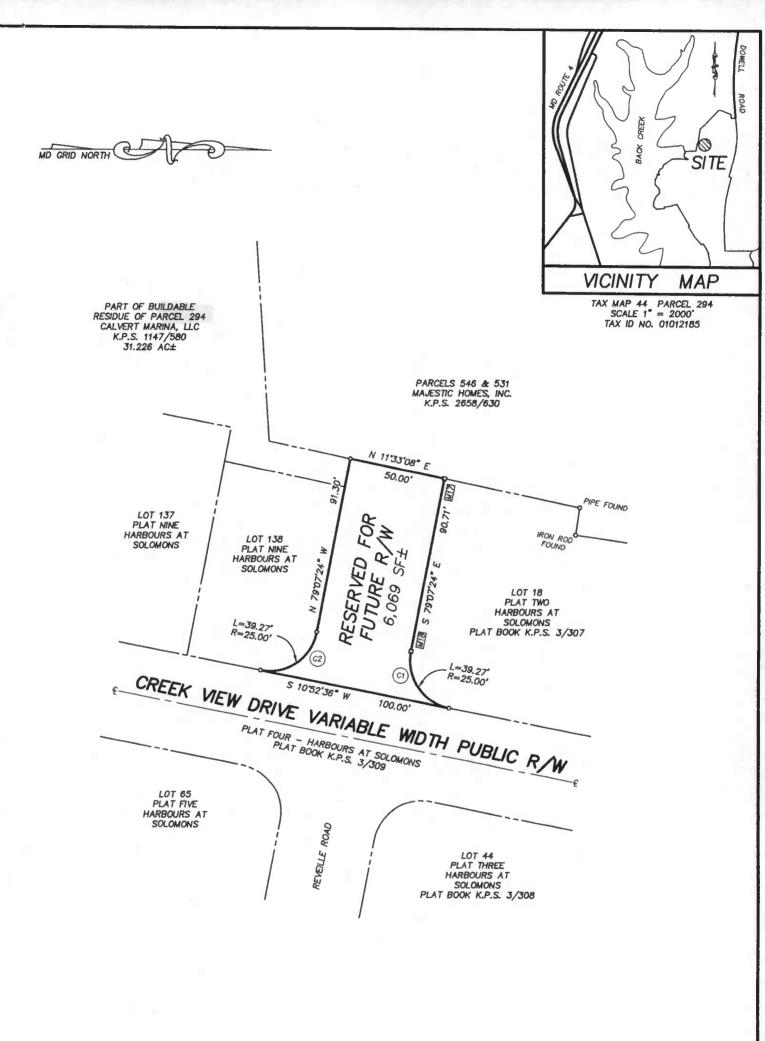
PROPERTY OWNER:	CALVERT MARINA, LLC
PROPERTY DEED REFERENCE:	K.P.S. 1147/580
SUBDIVISION NAME:	THE HARBOURS AT SOLOMONS
SUBDIVISION PLAT REFERENCE:	
PURPOSE OF PLAT:	RECORD PARCEL RESERVED FOR FUTURE R/W
ELECTION DISTRICT: (1) 2 3 AS	SESSORS MAP No. 44 PARCEL No. 294 TAX ID 01 012185
PLANNING COMMISSION APPRO	VAL FOR RECORDING
Lotof 3 one acre lots, A-1 District	t, from deed
Lotof 5 exempt from requirement	s for Recreation & Open Space
Date	David K. Humphreys, Secretary
CERTIFICATE BY THE HEALTH C	
26.04.03 allowing for community water	ements of the Maryland Department of the Environment Regulation r systems and community sewerage systems in the subdivision of land and it is conformance with the current County Water and Sewerage Plan Sewerage Planning Category S-1.
Date	David L. Rogers, County Health Office
CERTIFICATE BY THE OWNER	
subdivision, establish the minimum bui areas as specified. The streets, roads, o deeds, are for the purpose of description or effect an acceptance by the County (ies having proprietary interest in the property hereby adopt this plan of ilding restriction lines and dedicate the streets, alleys, walks and other open space and public sites shown herein, and the mention thereof in n only, and recording of the Final Plat shall not be deemed to constitute Commissioners; acceptance by the County may be accomplished by a assement is established 10 feet in width binding on all rights-of-way for blic utilities.
Date Witness	J. MATTHEW GAMBRILL
Date Witness	(Print Name
	(
CERTIFICATE BY REGISTERED S	SURVEYOR
I hereby certify that the plan shown by Calvert Marina Limited Partnership in Liber K.P.S. 1147 at Folio 580, Calv	herein is correct; that it is the subdivision of (part of) the land conveyed to Calvert Marina, LLC by deed dated December 30, 1998 and recorded vert County, Maryland. Permanent monuments and metal pipes have alvert County Subdivision Regulations and Article 21, 3-108, Annotated
Date	Lite V Heller

JAN 2 7 2009

ALAREM FORMISSION

Constal Pay

Seal



LEGEND

IRON ROD SET UNLESS OTHERWISE NOTED

OWNER: CALVERT MARINA, LLC P.O. BOX 157 SOLOMONS, MD 20688

			CURVE	DATA		
CURVE	LENGTH	RADIUS	DELTA	TANGENT	BEARING	CHORD
C1	39.27	25.00'	90'00'00"	25.00'	N 55'52'36" E	35.36
C2	39.27	25.00	90'00'00"	25.00'	N 34707'24" W	35.36

PLAT EIGHTEEN

PARCEL RESERVED FOR FUTURE R/W HARBOURS AT SOLOMONS

LOCATED IN DOWELL

FIRST DISTRICT, CALVERT COUNTY, MD

PLANNING & ZONING CASE NO. SD 02-08A

COLLINSON, OLIFF & ASSOCIATES, INC.

Surveyors · Engineers Land Planners

110 MAIN STREET PRINCE FREDERICK, MARYLAND 20678 301-855-1599 · 410-535-3101 · FAX 410-535-3103

SH DRAWN BY_ 1" = 50" SCALE _ JAN. 2009 DATE_

JOB NO.. FOLDER HARBOURS AT

SOLOMONS

SHEET 2 OF 3

SUBDIVISION PLAT RECORDED IN PLAT BOOK

C LATEST DATE HEREON

NOTES

- This subdivision is subject to the requirements of the Colvert County Stormwoter Monogement Ordinonce.
- 2) Development within this subdivision shall be subject to meeting all of the requirements of the Critical Areas IDA Zone and the Letter of Understanding executed by CG Solomons Marino, LLC, the Colvert County Planning Commission and the State of Maryland Critical Area Commission.
- 3) There is no 100 Yeor Flood Ploin within the plotted oreo shown hereon.
- 4) There are no wetlands or associated buffers within the plotted area shown hereon.
- 5) There are no steep slopes (15% or greater) within the platted area shown hereon.
- 6) The opplicont/lond owner sholl orronge for the Historic District Commission or its designee, to conduct on Archeological Assessment of the site prior to the issuance of ony demolition, grading and or building permits.
- 7) If orchoeological materials are discovered during site work, the contractor for development will cease work and contact the Department of Planning and Zoning immediately so that remains/findings may be evaluated and the information recorded in the interest of documenting the heritage of Colvert County prior to restorting work.
- 8) A perpetuol eosement is provided for the widening, future widening and/or construction and mointenance of the oreo adjacent to the right—of—way lines of the public roadways shown herein in accordance with the Colvert County Road Ordinance and Design Standards as currently amended and in effect at the time of approval for recordation of this plot. This easement shall include all storm drainage structures and appurtenances, excavation and construction of driveway entrances and approach roads, street intersections, gutters, swales, ditches, berm ditches, flumes and any other construction applicable to said widening, all as shown on the plot of subdivision.
- 9) Development within the Critical Area (IDA) requires that there be a 20% reduction in pollutants. The colculations have been provided and must be corried out through the road construction and stormwater management plans.
- 10) The 31.226 acre± residue of Parcel 294 is deemed buildable subject to obtaining all required County, Stote and Federal opprovals or permits.

PLAT EIGHTEEN

PARCEL RESERVED FOR FUTURE R/W
HARBOURS AT SOLOMONS

LOCATED IN DOWELL

FIRST DISTRICT, CALVERT COUNTY, MD

PLANNING & ZONING CASE NO. SD 02-08A

C COLLINSON, OLIFF & ASSOCIATES, INC.

Surveyors • Engineers Land Planners

110 MAIN STREET
PRINCE FREDERICK, MARYLAND 20678
855-1599 · 410-535-3101 · FAX 410-535-3103

DRAWN BY SH

SCALE 1" = 50'

DATE JAN. 2009

JOB NO. 1-8667

FOLDER HARBOURS AT SOLOMONS

C LATEST DATE HEREON

SHEET 3 OF 3

SUBDIVISION PLAT RECORDED IN PLAT BOOK

FINAL SUBDIVISION PLAT TRANSMITTAL

Department of Planning and Zoning

Calvert County

150 Main Street

Prince Frederick, MD 20678

Date:

Thursday, February 21, 2008

Mcmo To:

Principal Planner - Subdivision

Environmental Reviewer

County Engineer House Addressing

SHA

Critical Area Commission

Memo From

Olivia Vidotto - Planner I

Subject:

SD-02-08A

Project Name: The Harbours at Solomons

Road Frontage Dowell Rd.

Tax Map No: 44

Parcel No: 294

Tax ID No: 050101218

The attached subdivision has been submitted for final plan approval. It is requested that your agency review the attached plan and furnish in writing your comments within the scope of your agency's responsibility by:

Wednesday, September 12, 2007

Thursday, March 13, 2008

Please Note: If comments are not received from your agency by the above date, this office will assume your agency has no comments and will proceed with the processing of the application.

Comments:

Widmayer, Amber

From: Gallo, Kerrie

Sent: Monday, March 10, 2008 11:45 AM

To: Widmayer, Amber

Subject: FW: Oyster Bay Condo

I'm going through old emails...did I forward this to you? I know you have the plats in your office.

----Original Message----

From: Humphreys, David K. [mailto:humphrdk@co.cal.md.us]

Sent: Monday, February 25, 2008 4:22 PM

To: mawicke@comcast.net

Cc: Andrew; Pittman, Jr., William R.; Sunderland, Carolyn V.; Jackson, Mighel N.

Subject: RE: Oyster Bay Condo

Paul:

Bill Pittman our site plan reviewer has discussed the possibility of a change to the landscape plan of the Oyster Bay project with Barrett Associates. As we understand the purpose, it is to get a more realistic planting plan along the water's edge. It appears that the existing planting plan is impractical in that after it is planted, plant material will have to be removed to accommodate growth patterns as it matures. While Bill is not in the office this week, I don't believe we have yet received anything specific to review.

Re: Harbours at Solomons, it has received preliminary approval and the first check prints of the plats are circulating for review. It depends on what aspect of the project as to who the reviewers are:

- Carolyn Sunderland and Olivia Vidotto are coordinating the review, and reviewing the improvement plans and other zoning requirements of the preliminary.
- David Brownlee, Environmental Supervisor and his staff are reviewing the environmental aspects
- Mighel Jackson, Department of Public Works, is reviewing the engineering aspects.
- Critical Area Commission is reviewing the project for conformance with their negotiated settlement concerning the buffer areas.

DKH

David K Humphreys, AICP
Planning Commission Administrator
Calvert County Planning Commission
150 Main Street, Suite 304
Prince Frederick MD 20678

410-535-1600, ext 2636 410-414-3092 (fax)

humphrdk@co.cal.md.us

From: mawicke@comcast.net [mailto:mawicke@comcast.net]

Sent: Thursday, February 21, 2008 1:54 PM

To: Humphreys, David K.

Cc: Andrew

Subject: Oyster Bay Condo

David,

Oyster Bay LLC (Marrick) has revised or is requesting a revision to the landscape plan for the 16 acre track called Oyster Bay Condo's or it could be filed under the old name. Can you tell me what this revision is for? Public works agreement? Approved Site plans? Which one of your staff is handling this. Also who is handling the Harbors At Solomon project. Who close are they on their approvals? Thanks, Paul

This message has been scanned by F-Secure Anti-Virus for Microsoft Exchange. For more information, connect to http://www.f-secure.com/

goes in Cf. 474-06

CRITICAL AREA COMMISSION FOR THE CHESAPEAKE AND ATLANTIC COASTAL BAYS 1804 WEST STREET, SUITE 100 ANNAPOLIS, MD 21401

PROJECT NOTIFICATION APPLICATION

GENERAL PROJECT INFORMATION

Tax Map #	Parcel #	Block #	Lot#	Section	Date: Feb. G, 2008 FOR RESUBMITTAL ONLY
44	294			Bootion	Corrections
					No Change
	100				Non-Critical Area
Tax ID: O	1012185				*Complete Only Page 1
					General Project Information
Project Name	e (site name, su	bdivision nam	e, or other)	The Har	bours at Solomons
D 1	// 11				
Project locati	on/Address	14415	Dowell	Road	
City Don	1011				7:
City Con	211				Zip
Local case nu	umber SD o	02.08A			
	A				
Applicant:	Last name				First name
Company	CC Group	o, LLC			
	Type (check al	I that apply):			
Application '				***	RECEIVE
				Variance	
Building Perr					
Building Perr Buffer Manag	gement Plan			Rezoning	
Building Perr Buffer Manas Conditional U	gement Plan Jse			Rezoning Site Plan	FFR 2 2 2008
Building Perr Buffer Manag Conditional U Consistency I	gement Plan Jse Report			Rezoning Site Plan Special Exception	FEB 2 2 2008
Building Perr Buffer Manag Conditional U Consistency I Disturbance >	gement Plan Jse Report 5,000 sq ft			Rezoning Site Plan Special Exception Subdivision	FEB 2 2 2008
Building Perr Buffer Manag Conditional U Consistency I Disturbance >	gement Plan Jse Report 5,000 sq ft			Rezoning Site Plan Special Exception	FEB 2 2 2008 CRITICAL AREA COMMISSI
Building Perr Buffer Manag Conditional U Consistency I Disturbance > Grading Perm	gement Plan Jse Report 5,000 sq ft hit	Information:		Rezoning Site Plan Special Exception Subdivision	FEB 2 2 2008
Building Perr Buffer Manag Conditional U Consistency I Disturbance > Grading Perm	gement Plan Jse Report 5,000 sq ft	Information:		Rezoning Site Plan Special Exception Subdivision	FEB 2 2 2008 CRITICAL AREA COMMISSI
Building Perr Buffer Manag Conditional U Consistency I Disturbance > Grading Perm	gement Plan Jse Report 5,000 sq ft nit iction Contact	Information:		Rezoning Site Plan Special Exception Subdivision Other	FEB 2 2 2008 CRITICAL AREA COMMISSI Chesapeake & Atlantic Coastal 1
Building Perr Buffer Manag Conditional U Consistency I Disturbance > Grading Perm Local Jurisd	gement Plan Jse Report 5,000 sq ft nit iction Contact Vidotto			Rezoning Site Plan Special Exception Subdivision	FEB 2 2 2008 CRITICAL AREA COMMISSI Chesapeake & Atlantic Coastal
Building Perr Buffer Manag Conditional U Consistency I Disturbance > Grading Perm Local Jurisd	gement Plan Jse Report 5,000 sq ft nit iction Contact			Rezoning Site Plan Special Exception Subdivision Other First name	FEB 2 2 2008 CRITICAL AREA COMMISSI Chesapeake & Atlantic Coastal
Building Perr Buffer Manag Conditional U Consistency I Disturbance > Grading Perr Local Jurisd	gement Plan Jse Report 5,000 sq ft nit iction Contact Vidotto	2348		Rezoning Site Plan Special Exception Subdivision Other First name	FEB 2 2 2008 CRITICAL AREA COMMISSI Chesapeake & Atlantic Coastal

SPECIFIC PROJECT INFORMATION

Describe Proposed use of	f project site:				
Single family a	etached su	bdivision			
	Yes			Yes	
Intra-Family Transfer			Growth Allocation		
randfathered Lot		Buffer Exemption Ar	ea 📈		
			Dation Photophon 711	ca K	
Project Type (check all	that annly)				
	That apply)				
Commercial			Recreational		
Consistency Report			Redevelopment		
ndustrial			Residential	卤	
nstitutional			Shore Erosion Contro	ı ñ	
Mixed Use			Water-Dependent Fac	ility 🗍	
Other					
			_		
DA Area	Acres	Sq Ft	Total Disturbed Area	Acres	Sq Ft
DA Area	00.55		The second of the second of the		
CA Area			-		
			# of Lots Created	251	
	Cd4.33				
See	. attached	letter of c	inderstanding		
	Acres	Sq Ft	U	Acres	Sq Ft
xisting Forest/Woodland/T			Existing Impervious Surface		5411
reated Forest/Woodland/Ti			New Impervious Surface		
emoved Forest/Woodland/	Trees		Removed Impervious Surface		
			Total Impervious Surface		
ARIANCE INFORMA	TION (Charle of	II that annied			
	TION (Check a)	n that apply)			
	Acres	Sa Et			
-cc -D: / 1	Acres	Sq Ft		Acres	Sa Ft
	Acres	11 pc	Buffer Forest Clearing	Acres	Sq Ft
on-Buffer Disturbance	Acres	Syrt	Buffer Forest Clearing Mitigation	Acres	Sq Ft
on-Buffer Disturbance	Acres	Syri	Mitigation	Acres	Sq Ft
on-Buffer Disturbance Variance Type	Acres		Mitigation Structure	Acres	Sq Ft
Variance Type uffer	Acres	A	Mitigation Structure acc. Structure Addition	Acres	Sq Ft
Variance Type uffer rest Clearing	Acres	A	Mitigation Structure acc. Structure Addition	Acres	Sq Ft
Variance Type uffer prest Clearing PA Impact	Acres	A B D	Mitigation Structure acc. Structure Addition arn beck	Acres	Sq Ft
Variance Type uffer	Acres	A B D D	Mitigation Structure acc. Structure Addition arn beck welling	Acres	Sq Ft
Variance Type uffer	Acres	A B D D	Mitigation Structure Acc. Structure Addition Farn Deck Welling Welling Addition	Acres	Sq Ft
Variance Type Uariance Type uffer Drest Clearing PA Impact Dispervious Surface Expanded Buffer Dontidal Wetlands	Acres	A B D D D	Mitigation Structure Acc. Structure Addition Jeck Welling Welling Addition Jearage	Acres	Sq Ft
variance Type uffer	Acres	A B D D D G	Mitigation Structure Acc. Structure Addition Farm Seck Welling Welling Addition Farage Fazebo	Acres	Sq Ft
variance Type Uariance Type uffer	Acres	A B D D D G G	Mitigation Structure Acc. Structure Addition Form Service Addition Form Form Form Form Form Form Form Form	Acres	Sq Ft
variance Type Uariance Type uffer	Acres	A B D D D G G	Mitigation Structure Acc. Structure Addition Jeck Welling Welling Addition Jearage Jeazebo Actio	Acres	Sq Ft
	Acres	A B D D G G G	Mitigation Structure Acc. Structure Addition Form Service Addition Form Form Form Form Form Form Form Form	Acres	Sq Ft

T:\Forms-P&Z\2007SubdivisionForms\CriticalAreaTransmittalForm.doc Revised by C.A.C. 12/14/2006

Page 2 of 2 P&Z Form No. CA-102

CRITICAL AREA COMMISSION FOR THE CHESAPEAKE AND ATLANTIC COASTAL BAYS 1804 WEST STREET, SUITE 100 ANNAPOLIS, MD 21401

PROJECT NOTIFICATION APPLICATION

GENERAL PROJECT INFORMATION

Tax ID: C1 O1Z1B5 Complete Only Page 1 General Project Information Tax ID: C1 O1Z1B5 *Complete Only Page 1 General Project Information Project Name (site name, subdivision name, or other) The Harbours of Solomons Project location/Address 14415 Dowell Road City Dowell Zip Local case number SO O2 · O8 A Applicant: Last name First name Company CC Group, LLC Application Type (check all that apply): Building Permit Variance Rezoning Conditional Use Site Plan Conditional Use Site Plan Special Exception Special Exception Subdivision FEB 2 2 2008 Subdivision Subdivision Subdivision Subdivision Subdivision Corrections Redesign No Change Non-Critical Area Non-Critical Area				/	,	Г	: Feb. G, 2008
Project Name (site name, subdivision name, or other) Project Name (site name, subdivision name, or other) Project location/Address A415 Dowell Road			Block#	Lot#	Section		Redesign
City Dowell Zip Docal case number SD 02.08A Applicant: Last name First name Company CC Group, LLC Application Type (check all that apply): Suilding Permit Variance Rezoning Site Plan Special Exception Special Exception Subdivision Other CRITICAL AREA COMMIST Cocal Jurisdiction Contact Information: Last name Vidotto Vidotto First name Olivia Phone # 410.535.2348 Response from Commission Required By 3/13/08	Tax ID: O	012185					
Zip Dowell Zip Dowell Zip Dowell Zip Zip Dowell Zip Zip Dowell Zip						rbours .	at Solomons
Applicant: Last name First name Company CC Group, LLC Application Type (check all that apply): Suilding Permit Variance Rezoning Site Plan Special Exception Special Exception Siturbance > 5,000 sq ft Subdivision Other CRITICAL AREA COMMISTANCE Cocal Jurisdiction Contact Information: Last name Vidotto First name Olivia Phone # 410.535.2348 Response from Commission Required By 3/13/08			7475	DOMEN	Koad	Zip	
Company CC Group, LLC Application Type (check all that apply): Suiding Permit	ocal case nu	mber 50 0	2.08A				
Application Type (check all that apply): Stuilding Permit	applicant:	Last name				First na	me
Statistic Contact Information: Variance Rezoning Site Plan Special Exception Subdivision Other Critical Area Commission Chesapeake & Atlantic Coasta	ompany	CC Group	LLC				
Suilding Permit Suffer Management Plan Conditional Use Consistency Report Siste Plan Special Exception Subdivision Other Contact Information: Last name Vidotto First name Vidotto Rezoning Site Plan Special Exception Subdivision Other CRITICAL AREA COMMIST Chesapeake & Atlantic Coasta Phone # 410.535.2348 Response from Commission Required By 2/3/08	pplication 7	Гуре (check all	that apply):				
Last name Vidotto First name Olivia Phone # 410.535.2348 Response from Commission Required By 3/13/08	Building Pern Buffer Manag Conditional U Consistency R Disturbance >	nit [gement Plan [lse [Report [5,000 sq ft [Rezoning Site Plan Special Except Subdivision	tion	CRITICAL AREA COMMISSION
Phone # 410.535.2348 Response from Commission Required By 3/13/08	ocal Jurisdi	ction Contact I	nformation:	1		and the second	Chesapeake & Atlantic Coastal B
	Last name _	Vidotto			First name	Olivia	
Fax # 410-414-3092 Hearing date	Phone #	410.535.2	348	Respor	nse from Comm	nission Req	uired By 3/13/08
	For #	410-414-3092			Hearing date		

SPECIFIC PROJECT INFORMATION

Describe Proposed use	of project s	ite:	**			
Single family	detache	d sui	bdivision			
					•	
	Yes				V	
Intra-Family Transfer	П			Growth Allocation	Yes	٠.
Grandfathered Lot	H					
				Buffer Exemption A	rea 💢	
D						
Project Type (check a	ll that appl	y)				
Commercial				Recreational		
Consistency Report				Redevelopment		
Industrial	П			Residential		
nstitutional	Ħ			Shore Erosion Contro		
Mixed Use	Ħ					
Other	H			Water-Dependent Fac	cinty [
SITE INVENTORY (I	Acres	- 4	Sq Ft	Total Disturbed Area	Acres	Sq Ft
DA Area	46.	33] Tomi Disturbed Area	44.1	
DA Area						
CA Area				# of Lots Created 25/		
otal Area	Col. 3	3		" of Bots Greated	237	
xisting Forest/Woodland	/Trees	Acres	Sq Ft	Existing Impervious Surface	Acres	Sq Ft
reated Forest/Woodland/				New Impervious Surface		
emoved Forest/Woodlan	d/Trees			Removed Impervious Surface		
				Total Impervious Surface		
ARIANCE INFORM	ATION (C	heck al	l that apply)			
		Acres	Sq Ft		A	~ -
uffer Disturbance		10103	Sqrt	Buffer Forest Clearing	Acres	Sq Ft
on-Buffer Disturbance				Mitigation		
1818 C 351				Witigation		
Variance Type	7			Structure		
uffer			A	cc. Structure Addition		
orest Clearing]		B	arn		
PA Impact]		D	eck		
pervious Surface			D	welling		
cpanded Buffer				welling Addition		
ontidal Wetlands				arage		
etback] .			azebo		
eep Slopes]			atio		
ther]			Pool		
				ned \Box		
				ther		

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Page 2 of 2 P&Z Form No. CA-102

FINAL SUBDIVISION PLAT TRANSMITTAL

Department of Planning and Zoning

Calvert County

150 Main Street

Prince Frederick, MD 20678

Date:

Friday, August 24, 2007

Memo To:

Principal Planner - Subdivision

Environmental Reviewer

County Engineer
House Addressing

SHA

Critical Area Commission

Memo From

Olivia Vidotto - Planner I

Subject:

SD-02-08A

OD 02 00:1

Project Name: The Harbours at Solomons

Road Frontage Dowell Rd.

Tax Map No: 44

Parcel No: 294

Tax ID No: 05010

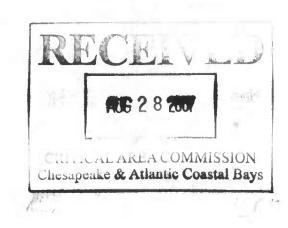
050101218

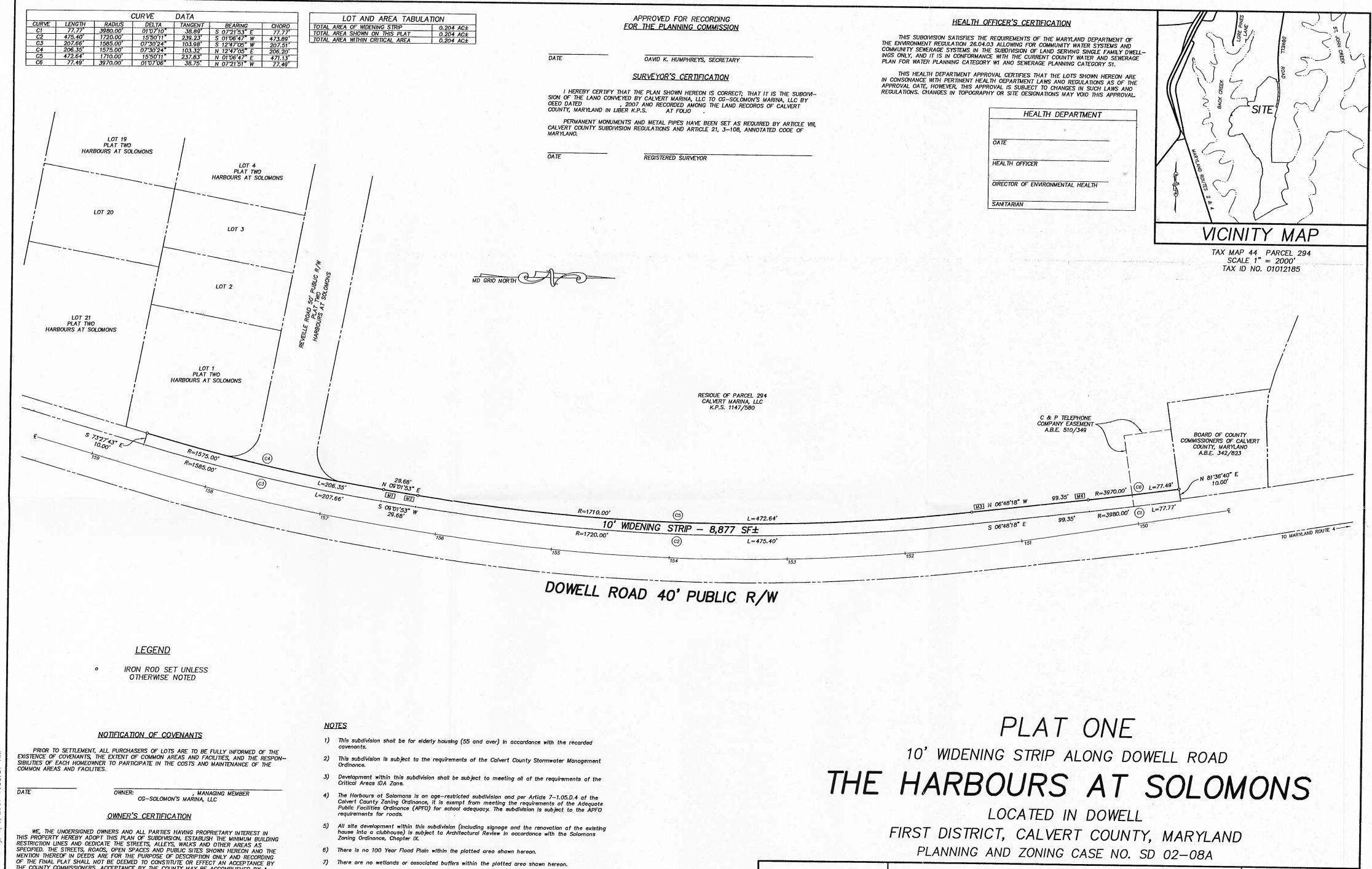
The attached subdivision has been submitted for final plan approval. It is requested that your agency review the attached plan and furnish in writing your comments within the scope of your agency's responsibility by:

Wednesday, September 12, 2007

Please Note: If comments are not received from your agency by the above date, this office will assume your agency has no comments and will proceed with the processing of the application.

Comments:





COORDINATES

MO. NORTH EAST
M1 244307.08 1469171.66
M2 244336.40 1469176.32
M3 244807.44 1469185.47
M4 244906.09 1469173.70

SUBSEQUENT APPROPRIATE ACT.

WITNESS

AND THE SETTING OF MARKERS, HAVE BEEN MET.

OWNER: MANAGING MEMBER CG-SOLOMON'S MARINA, LLC P.O. BOX ZZZ ZZZZZZZZ, MO 00000

THE COUNTY COMMISSIONERS. ACCEPTANCE BY THE COUNTY MAY BE ACCOMPLISHED BY A

WITH THE PUBLIC SERVICE COMMISSION ORDER NO. 60316. THE TELEPHONE COMPANY MAY

REQUIRE A PRE-CONSTRUCTION REFUNDABLE DEPOSIT IN ACCORDANCE WITH PARAGRAPH 7

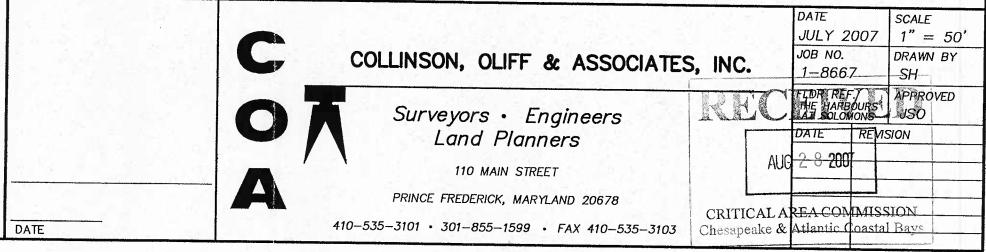
SECTION 3-108, REAL PROPERTY ARTICLE OF THE ANNOTATED CODE OF MARYLAND, 1974
EDITION, AS CURRENTLY AMENDED, AS FAR AS THEY RELATE TO THE MAKING OF THIS PLAT

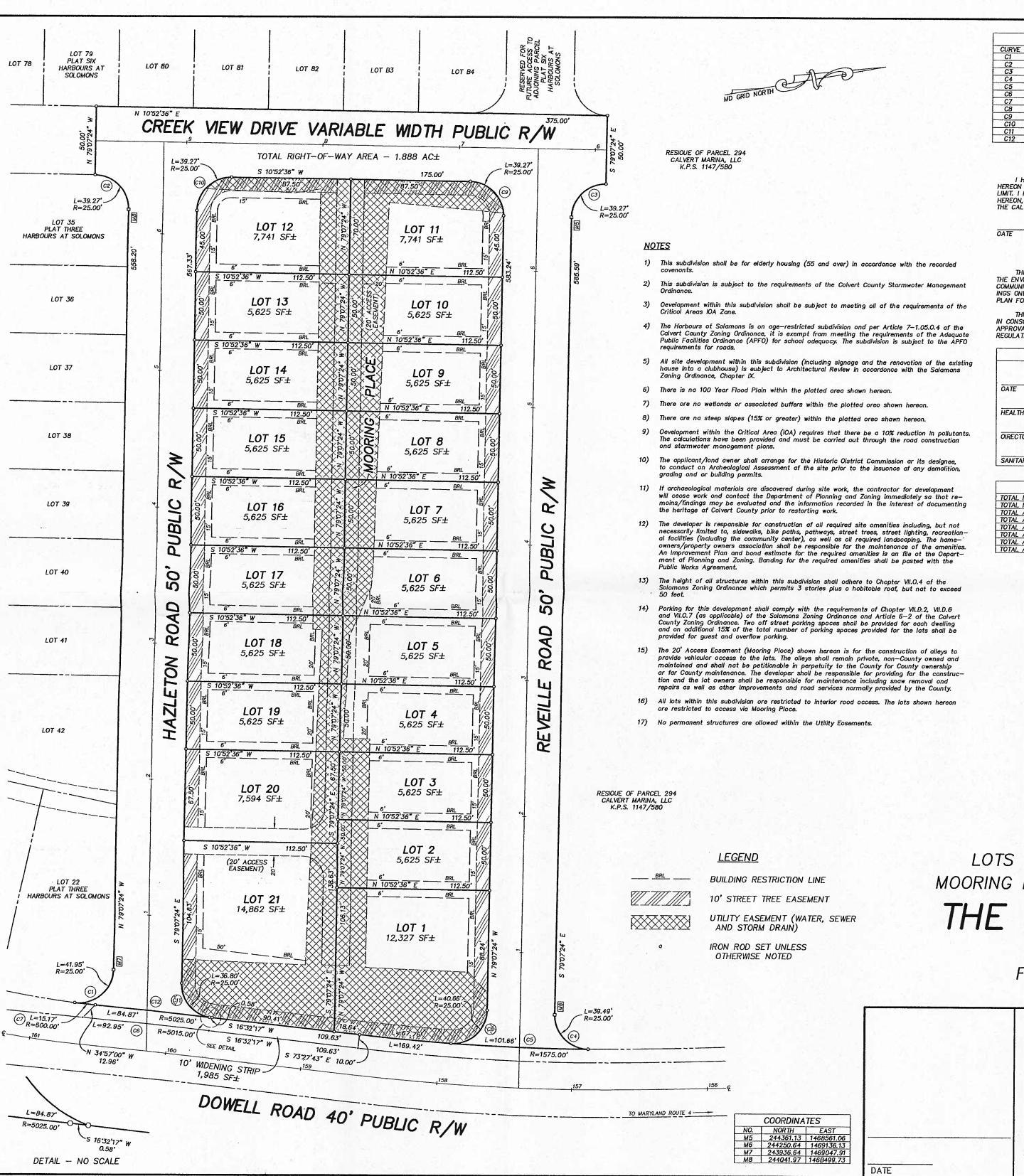
A UTILITY EASEMENT IS ESTABLISHED TEN FEET IN WIDTH, BINDING ON ALL RIGHT-OF-WAYS FOR THE INSTALLATION AND MAINTENANCE OF PUBLIC UTILITIES. ALL UTILITIES INCLUDING GAS, ELECTRIC AND COMMUNICATION SHALL BE INSTALLED UNDERGROUND IN ACCORDANCE

WE HEREBY CERTIFY THAT TO THE BEST OF OUR KNOWLEGGE, THE REQUIREMENTS OF

- 7) There are no wetlands or associated buffers within the plotted area shawn hereon.
- Development within the Criticol Areo (IOA) requires that there be a 10% reduction in pollutants. The calculations have been provided and must be corried out through the road construction and stormwater management plons.
- 9) The applicant/land awner shall arrange for the Historic District Commission or its designee, to conduct an Archeological Assessment of the site prior to the issuance of any demolition, grading ond or building permits.
- If orchaeological materials are discavered during site work, the contractor for development will ceose work and contact the Department of Planning and Zoning immediately so that remains/findings may be evaluated and the informatian recorded in the interest of documenting the heritoge of Calvert County prior to restarting work.
- 11) The developer is responsible for construction of all required site omenities including, but nat The developer is responsible for construction of all required site omenities including, but not necessarily limited to, sidewalks, bike poths, pothways, street trees, street lighting, recreotion—of focilities (including the community center), as well os oil required londscoping. The home—awners/property awners association shall be responsible for the maintenance of the omenities. An improvement Plan and band estimate for the required amenities is an file of the Depart ment of Plonning and Zoning. Bonding for the required amenities shall be posted with the

PLANNING AND ZONING CASE NO. SD 02-08A





			CURVE	DATA		
CURVE	LENGTH	RAOIUS	OELTA	TANGENT	BEARING	CHORO
C1	41.95	25.00	96'08'33"	27.83	N 31°03'08" W	37.20
C2	39.27	25.00	90'00'00"	25.00'	S 55'52'36" W	35.36
C3	39.27*	25.00	90'00'00"	25.00*	S 34"07"24" E	35.36*
C4	39.49	25.00'	90'30'07"	25.22'	N 55'37'33" E	35.51
C5	169.42	1575.00'	06°09'4B"	B4.79'	S 13'27'23" W	169.34
C6	92.95'	5015.00	01'03'43"	46,47	S 16"00'26" W	92.94
C7	15.17'	600.00	01"26"55"	7.59	S 1617'41" W	15.17
C8	40.66'	25.00'	9371'47"	26.44	N 32'31'31" W	36.33'
C9	39.27'	25.00'	90'00'00"	25.00'	S 55'52'36" W	35.36'
C10	39.27'	25.00'	90'00'00"	25.00'	S 34°07'24" E	35.36
C11	36.B0°	25.00'	B4"20"19"	22.64	N 5B'42'26" E	33.57
C12	B4.B7'	5025.00'	00'5B'04"	42.44'	S 16°03'15" W	B4.87'

SIGHT DISTANCE CERTIFICATION

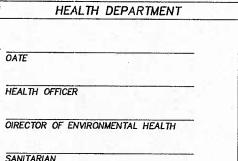
I HEREBY CERTIFY THAT THE SIGHT DISTANCE AT THE STREET INTERSECTIONS SHOWN HEREON MEETS OR EXCEEDS THE AASHTO SIGHT DISTANCE CRITERIA FOR THE POSTEO SPEED LIMIT. I FURTHER CERTIFY THAT A LOCATION EXISTS ALONG THE FRONTAGE OF THE LOTS SHOWN HEREON, BE IT ON A PUBLIC ROAO OR ALLEY, THAT MEETS OR EXCEEDS THE REQUIREMENTS OF THE CALVERT COUNTY ROAO SPECIFICATION PLATE RO-9.

REGISTEREO SURVEYOR

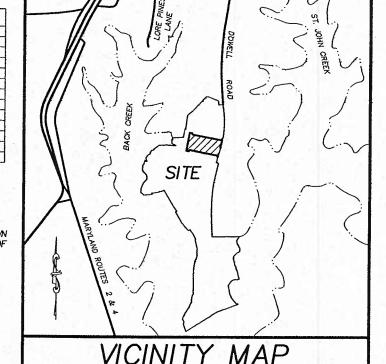
HEALTH OFFICER'S CERTIFICATION

THIS SUBOINSION SATISFIES THE REQUIREMENTS OF THE MARYLAND OEPARTMENT OF THE ENVIRONMENT REGULATION 26.04.03 ALLOWING FOR COMMUNITY WATER SYSTEMS AND COMMUNITY SEWERAGE SYSTEMS IN THE SUBOINSION OF LAND SERVING SINGLE FAMILY DWELL-INGS ONLY, AND IT IS IN CONFORMANCE WITH THE CURRENT COUNTY WATER AND SEWERAGE PLAN FOR WATER PLANNING CATEGORY WI AND SEWERAGE PLANNING CATEGORY S1.

THIS HEALTH OEPARTMENT APPROVAL CERTIFIES THAT THE LOTS SHOWN HEREON ARE IN CONSONANCE WITH PERTINENT HEALTH OEPARTMENT LAWS AND REGULATIONS AS OF THE APPROVAL OATE, HOWEVER, THIS APPROVAL IS SUBJECT TO CHANGES IN SUCH LAWS AND REGULATIONS. CHANGES IN TOPOGRAPHY OR SITE OESIGNATIONS MAY VOID THIS APPROVAL.



LOT AND AREA TABULAT	TON
TOTAL NO. OF NEW LOTS	21
TOTAL NO. OF REVISEO LOTS	0
TOTAL AREA OF NEW LOTS	3.220 AC±
TOTAL AREA OF PUBLIC RIGHT-OF-WAYS	1.888 AC±
TOTAL AREA OF WIOENING STRIP	0.046 AC±
TOTAL AREA SHOWN ON THIS PLAT	5.154 AC±
TOTAL AREA WITHIN CRITICAL AREA	5.154 AC±
TOTAL AREA OUTSIDE OF CRITICAL AREA	O AC±



TAX MAP 44 PARCEL 294 SCALE 1" = 2000' TAX ID NO. 01012185

APPROVED FOR RECORDING FOR THE PLANNING COMMISSION

OAVID K. HUMPHREYS, SECRETARY

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY THAT THE PLAN SHOWN HEREON IS CORRECT; THAT IT IS THE SUBOIVI—SION OF THE LANO CONVEYEO BY CALVERT MARINA, LLC TO CG—SOLOMON'S MARINA, LLC BY OEED DATED , 2007 AND RECOROED AMONG THE LAND RECORDS OF CALVERT COUNTY, MARYLANO IN LIBER K.P.S. AT FOLIO .

PERMANENT MONUMENTS AND METAL PIPES HAVE BEEN SET AS REQUIRED BY ARTICLE VIII, CALVERT COUNTY SUBDIVISION REGULATIONS AND ARTICLE 21, 3-108, ANNOTATED CODE OF MARY AND

REGISTEREO SURVEYOR

NOTIFICATION OF COVENANTS

PRIOR TO SETTLEMENT, ALL PURCHASERS OF LOTS ARE TO BE FULLY INFORMEO OF THE EXISTENCE OF COVENANTS, THE EXTENT OF COMMON AREAS AND FACILITIES, AND THE RESPONSIBILITIES OF EACH HOMEOWNER TO PARTICIPATE IN THE COSTS AND MAINTENANCE OF THE COMMON AREAS AND FACILITIES.

OWNER: , MANAGING MEMBER CC-SCLOMON'S MARINA, LLC

OWNER'S CERTIFICATION

WE, THE UNOERSIGNEO OWNERS AND ALL PARTIES HAVING PROPRIETARY INTEREST IN THIS PROPERTY HEREBY AOOPT THIS PLAN OF SUBDIVISION, ESTABLISH THE MINIMUM BUILDING RESTRICTION LINES AND OEDICATE THE STREETS, ALLEYS, WALKS AND OTHER AREAS AS SPECIFIED. THE STREETS, ROADS, OPEN SPACES AND PUBLIC SITES SHOWN HEREON AND THE MENTION THEREOF IN OEEDS ARE FOR THE PURPOSE OF DESCRIPTION ONLY AND RECORDING OF THE FINAL PLAT SHALL NOT BE DEEMED TO CONSTITUTE OR EFFECT AN ACCEPTANCE BY THE COUNTY COMMISSIONERS. ACCEPTANCE BY THE COUNTY MAY BE ACCOMPLISHED BY A SUBSEQUENT APPROPRIATE ACT.

A UTILITY EASEMENT IS ESTABLISHED TEN FEET IN WIDTH, BINOING ON ALL RIGHT-OF-WAYS FOR THE INSTALLATION AND MAINTENANCE OF PUBLIC UTILITIES. ALL UTILITIES INCLUOING GAS, ELECTRIC AND COMMUNICATION SHALL BE INSTALLED UNDERGROUND IN ACCORDANCE WITH THE PUBLIC SERVICE COMMISSION ORDER NO. 60316. THE TELEPHONE COMPANY MAY REQUIRE A PRE-CONSTRUCTION REFUNDABLE DEPOSIT IN ACCORDANCE WITH PARAGRAPH 7 OF THAT ORDER.

WE HEREBY CERTIFY THAT TO THE BEST OF OUR KNOWLEGGE, THE REQUIREMENTS OF SECTION 3-108, REAL PROPERTY ARTICLE OF THE ANNOTATEO COOE OF MARYLAND, 1974 EOITION, AS CURRENTLY AMENOEO, AS FAR AS THEY RELATE TO THE MAKING OF THIS PLAT AND THE SETTING OF MARKERS, HAVE BEEN MET.

WITNESS

MANAGING MEMBER'
CG-SOLOMON'S MARINA, LLC
P.O. BOX ZZZ
ZZZZZZZZ, MO 00000

PLAT TWO

LOTS 1 THROUGH 21, REVEILLE ROAD, HAZLETON ROAD, MOORING PLACE AND 10' WIDENING STRIP ALONG DOWELL ROAD

THE HARBOURS AT SOLOMONS

LOCATED IN DOWELL
FIRST DISTRICT, CALVERT COUNTY, MARYLAND
PLANNING AND ZONING CASE NO. SD 02-08A



COLLINSON, OLIFF & ASSOCIATES, INC.

Surveyors • Engineers Land Planners

110 MAIN STREET
PRINCE FREDERICK, MARYLAND 20678

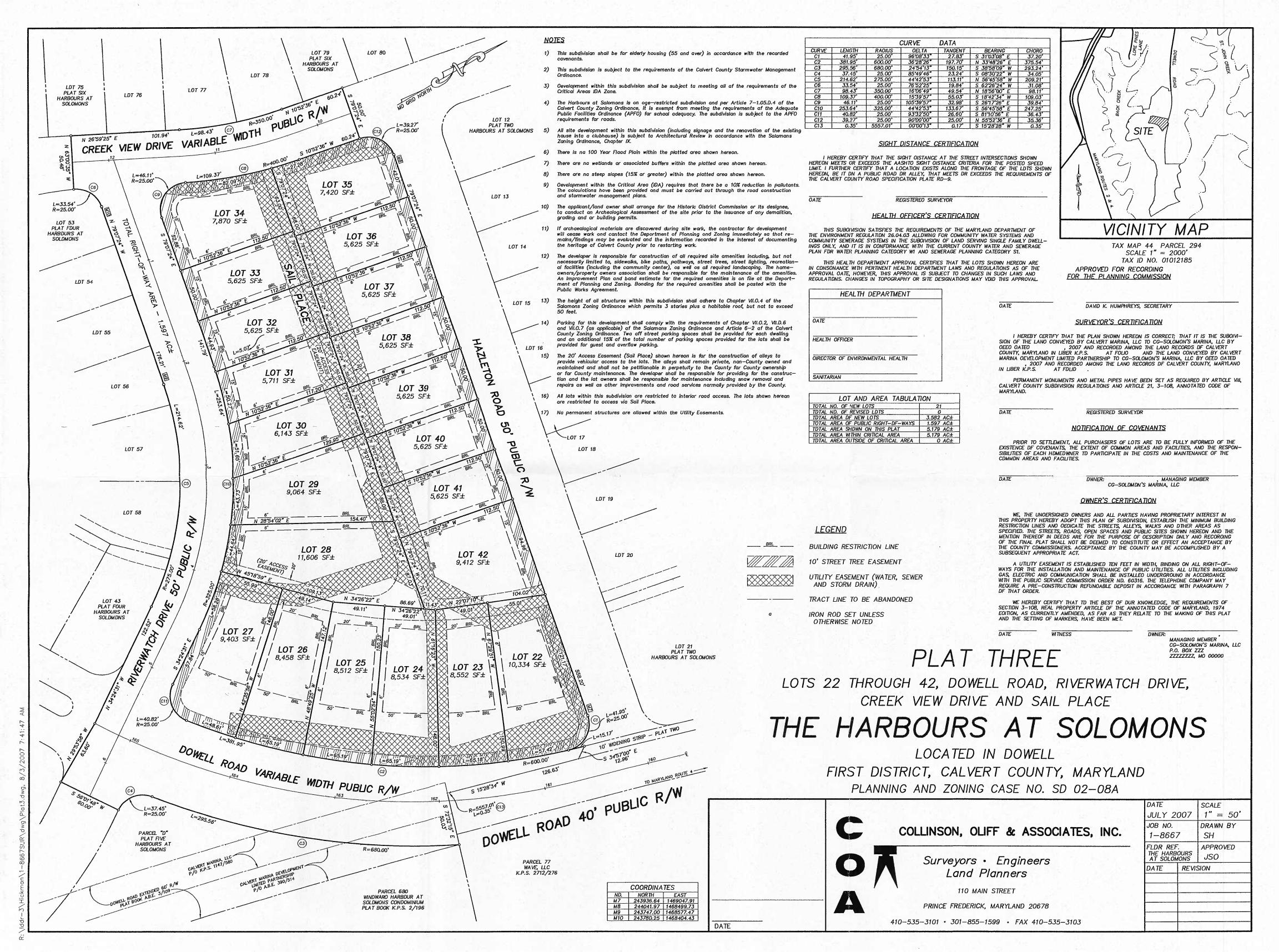
410-535-3101 · 301-855-1599 · FAX 410-535-3103

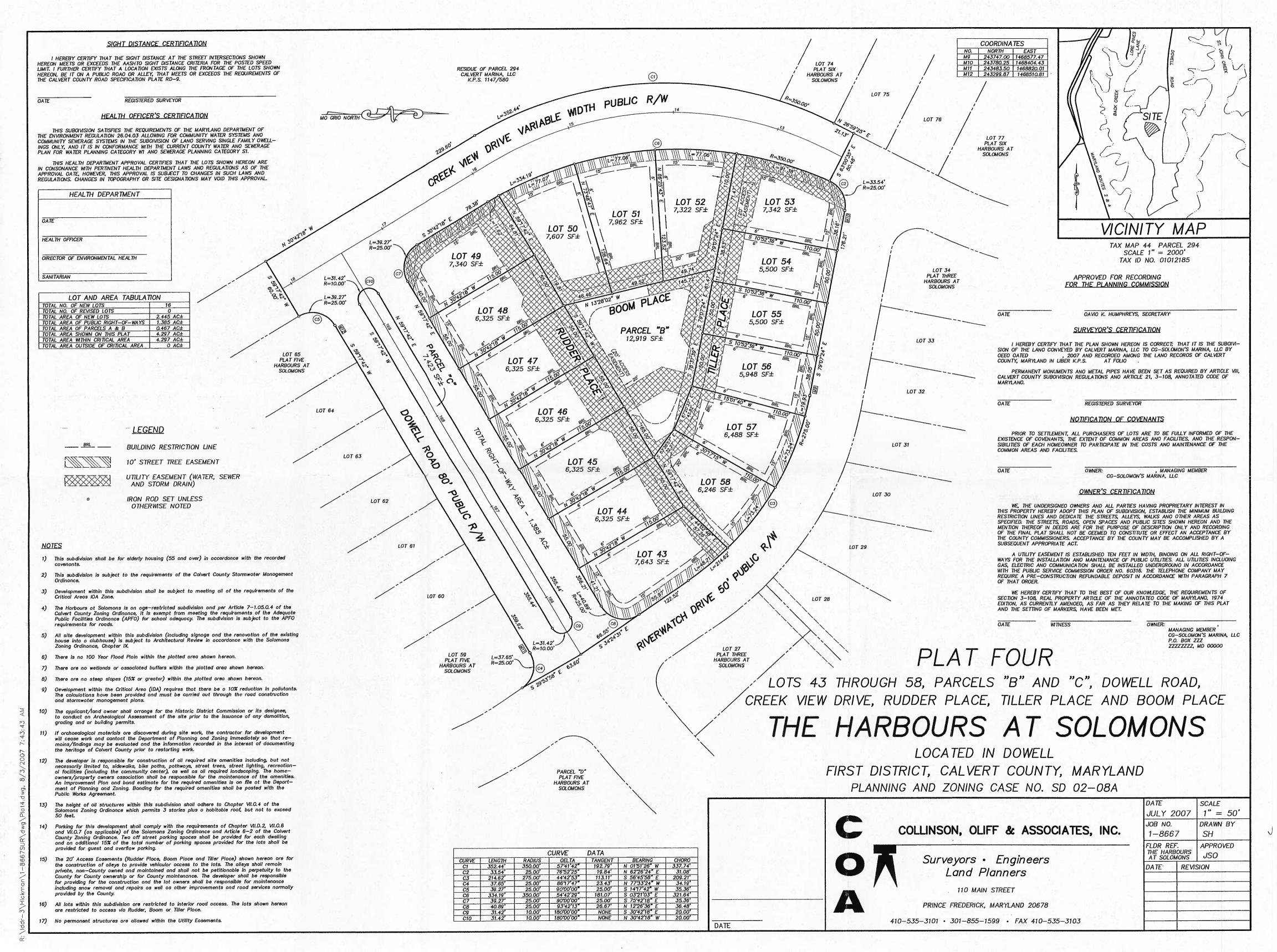
DATE
JULY 2007 1" = 50'

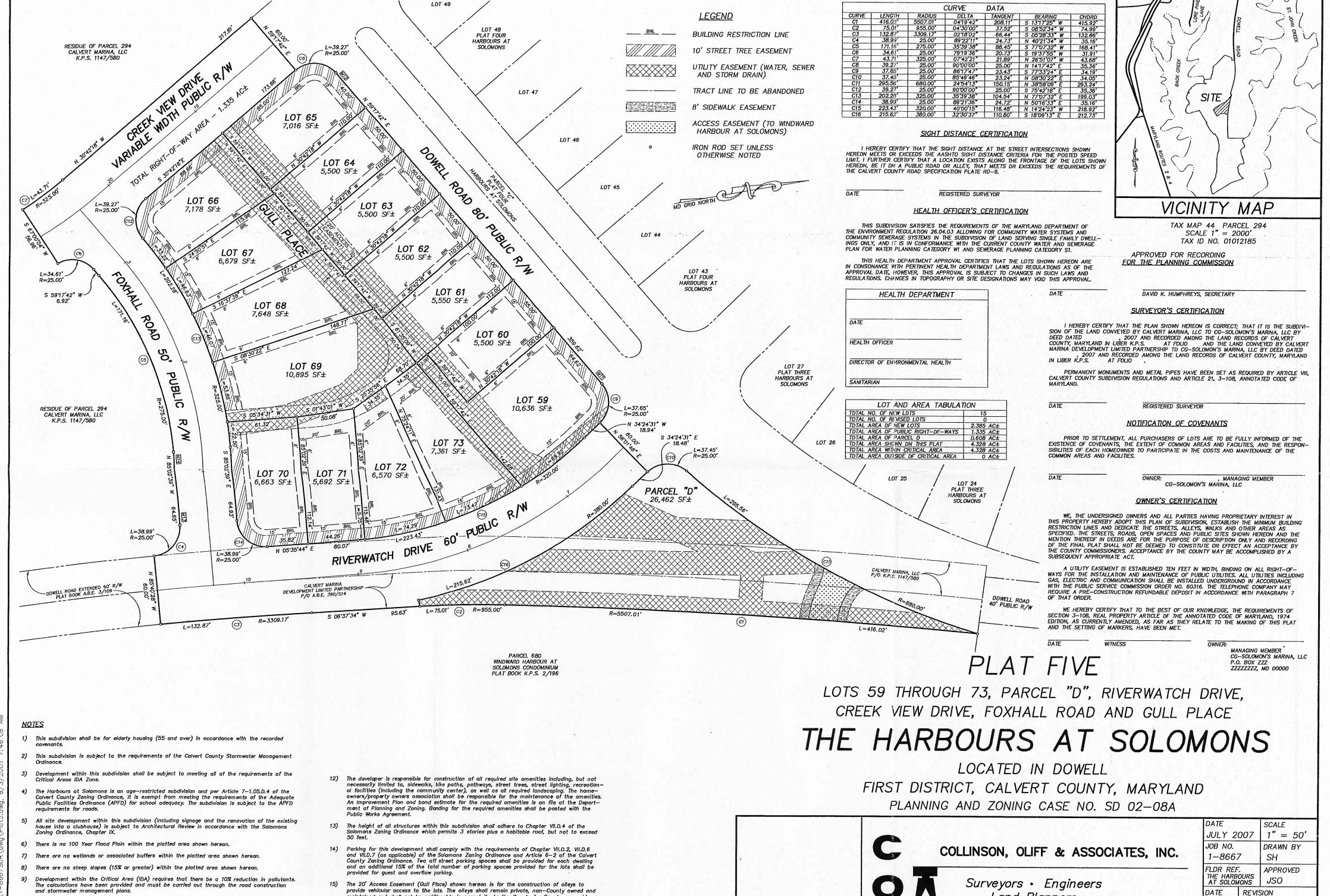
JOB NO. DRAWN BY
1-8667 SH

FLDR REF. APPROVED
THE HARBOURS
AT SOLOMONS JSO

DATE REVISION







COORDINATES

 NO.
 NORTH
 EAST

 M11
 243483.50
 1468820.01

 M12
 243299.87
 1468510.81

 M13
 243096.52
 1468879.12

 M14
 243102.10
 1468814.72

DATE

mointoined and sholl not be petitionable in perpetuity to the County far County ownership

repoirs as well as ather Improvements and rood services normally pravided by the Caunty,

16) All lats within this subdivision are restricted to Interior road occess. The lots shawn hereon

ore restricted to access via Gull Place.

17) No permanent structures ore allowed within the Utility Easements.

or far County mointenance. The developer shall be responsible for praviding for the construction and the lot awners shall be responsible for mointenance including snow removal and Land Planners

110 MAIN STREET

PRINCE FREDERICK, MARYLAND 20678

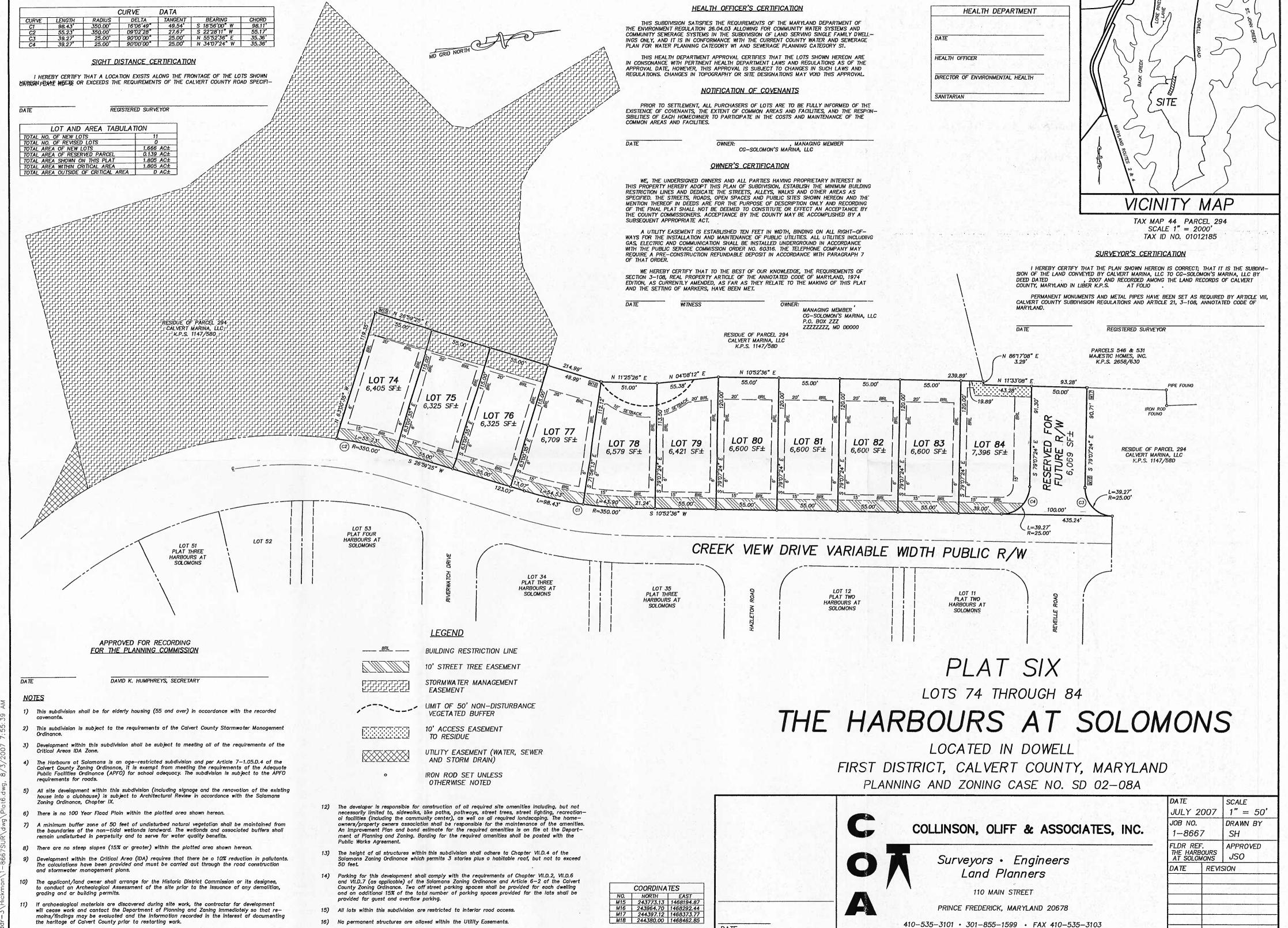
410-535-3101 · 301-855-1599 · FAX 410-535-3103

The applicant/land awner shall orrange for the Historic District Cammissian ar its designee, to canduct an Archeological Assessment of the site prior to the issuance of any demolition,

If archaeological materials are discovered during site wark, the controctor for development will coose wark and contact the Department of Plonning and Zaning immediately so that re-

the heritoge af Calvert County prior to restarting wark.

mains/findings may be evaluated and the information recorded in the interest of documenting



DATE

PRINCE FREDERICK, MARYLAND 20678

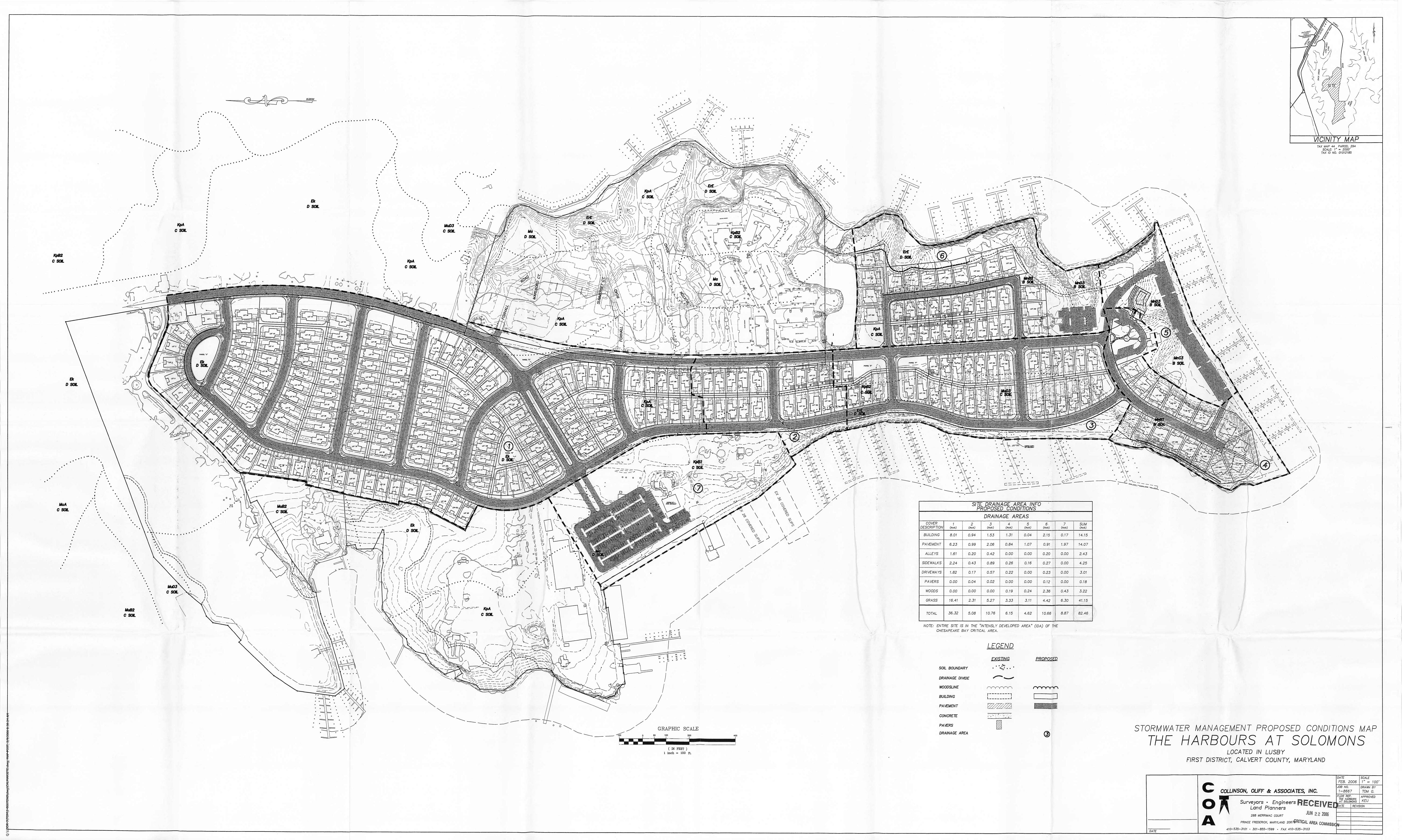
410-535-3101 • 301-855-1599 • FAX 410-535-3103

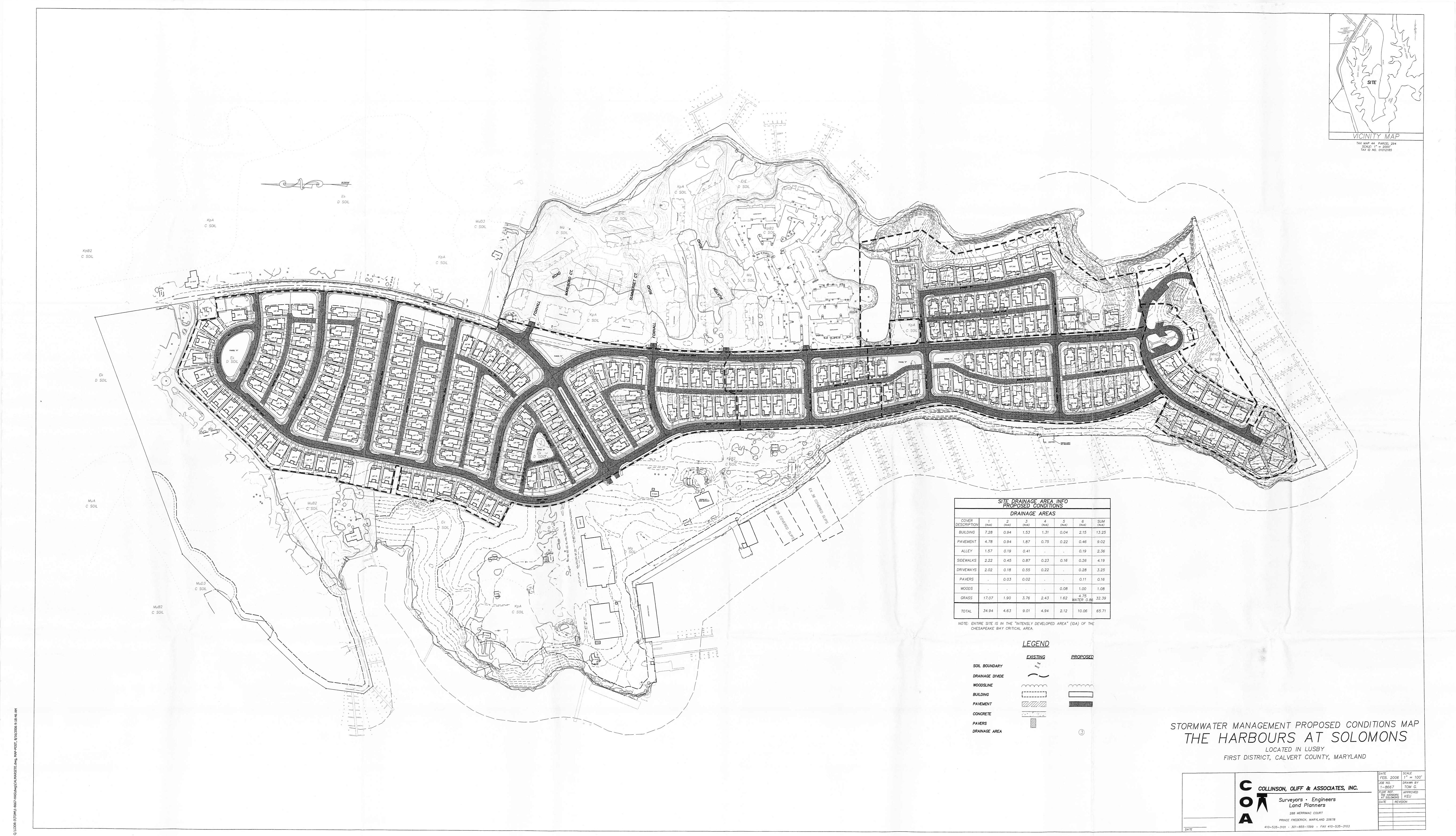
If archoeological materiols are discovered during site work, the contractor far development will cease work ond cantact the Department of Plonning and Zaning immediately so that re-

moins/findings may be evaluated and the information recorded in the interest of documenting the heritage of Colvert County prior to restarting work.

15) All lots within this subdivision are restricted to interlar rood occess.

16) Na permanent structures ore ollawed within the Utility Eosements.





MAJOR SUBDIVISION TRANSMITTAL

Department of Planning and Zoning

Calvert County

150 Main Street

Prince Frederick, MD 20678

Date:

Memo To:

Principal Planner - Subdivision

Environmental Reviewer - Roxana Whitt

County Engineer - Mary Cook

Traffic Engineer

Historic District Commission

Water and Sewer Health Department

SMECO SHA

Also To:

Critical Area Commission

DNR - Coastal Resources Division MDE - Tidal Wetlands Division

FEB 7 3 2 23 CRITICAL AREA COMMISSION

DNR - Fish, Heritage and Wildlife Administration Chesapeake & Atlantic Coastal Bays

Memo From:

Olivia Vidotto - Planner I

Subject:

SD-02-08A

Project Name: The Harbours at Solomons

Road Frontage Dowell Rd.

Lots Proposed: 252

Tax Map No: 44

Parcel No: 294

Tax ID No: 01-012185

The attached subdivision has been submitted for preliminary plan approval. It is requested that your agency review the attached plan and furnish in writing your comments within the scope of your agency's

responsibility by:

Monday, March 13, 2006

Comments:

CRITICAL AREA FORM

Please fill in the appropriate blanks or check box the appropriate answer if the property is in the Critical Area (all land within 1,000 feet of the Mean High Water Line of the Chesapeake Bay, it's tributaries or the landward boundary of an adjacent wetland is considered to be within the Critical Area).

Your application for development will not be considered complete until the following form has been filled out and submitted to the Department of Planning and Zoning.

Address: Location	Name: CALVERT MARINA, LLC. Telephone: 410.376-4751 P.O. Box 157 Sourmons, Mp. Zoca8 of Property to be developed Southern END of Domes Room,
	Tax Map#: 44 Parcel #: 294 Lot#: Grid#:
1.	Tax ID #: 01 012185
2.	Subdivision Name: THE HARBOURS AT SOLOMONS
3.	Property is designated: Intensly Developed (IDA) Limited Developed (LDA) Resource Conservation (RCA) To find out what your property is designated, consult the Critical Area Map in the Department of Planning and Zoning.
4.	Type of development being proposed. Check all that apply.
	Residential Redevelopment Commercial Mixed
5.	Project category
	Existing Lot Subdivision which creates buildable lots Site Plan Subdivision which does not create buildable lots
6.	Total acreage of property: 97.743 Ac. (69.491 ACRES IN SUSD.)

	7.	Total acreage of property within the Critical Area
		IDA 97.7434c. LDA RCA
	8.	Total acreage being disturbed within the Critical Area 65 A ±
	SUBI	DIVISION
	9.	Number of lots to be created in the Critical Area
	10. 11. 12. 13. 14. 15. 16. 17.	Number of dwelling units to be created in the Critical Area Minimum lot size in the Critical Area Maximum lot size in the Critical Area Average lot size in the Critical Area Linear length of waterfront in feet of original parcel Is this an intrafamily transfer? If a subdivision, is cluster development being used? If yes, how many acres of open space will be created by the clustering? If a subdivision, how many acres of recreation area will be provided? WTH ALLOCATION
	18. 19. 20.	Is use of the growth allocation necessary How many acres of growth allocation are you requesting? Are all non-water dependent uses more than 300 feet from the water? Yes No
	STAF	F USE ONLY
	21.	Number of acres of growth allocation approved
	WET	LANDS
٠	22.	Identify wetlands (tidal and non-tidal rivers, bays, streams, marshlands, swamps, bogs, etc.), hydric soils and highly erodible soils on plat.
	23.	Is site adjacent to or does it include within its boundary any tidal waters or wetlands or non-tidal streams that are tributaries to tidalwaters? Yes X No
		If yes, identify wetland buffer on plat according to section 8-2.03A (Floodplain), 8-2.05A, C and D (Wetlands) of the Zoning Ordinance.

24.	Is site adjacent to or does it include within its boundary as	ny non-tidal waters or wetlands?
•	If yes, identify wetland buffer on plat according to section	V Voc Dat
25.	Is any disturbance to the buffer proposed?	Yes No
	If yes, then either a Buffer Manangement Permit or a vari	ance may be necessary
FOR	EST LAND / BUFFER	
26.	Is site within a Buffer Exempt area?	
	If yes, what is the shortest distance between mean high woon adjacent lots or parcels?	ater and any existing structure
27.	Is the following shown on plat?	X Yes No
	Identify vegetated areas (marshes, forests) on plat.	
	 a. How many acres of site are covered by forest? b. How many acres of forest are proposed for clearing? c. How many acres of forest will be replanted on site? 	35.9 A. ± 25.7 A. ± 6 (LDA and RCA only).
	A maximum of 30% of the forest can be removed thou. Lieu shall be required.	gh replantings and/or Fees-in-
28.	15% or greater of the site covered with forest?	X Yes No
	(LDA & RCA only) 15% of the site shall be maintained shall be recorded with the record plat. How many acres we	or planted in trees and this fact vill be replanted?
29.	Does the site have slopes greater than or equal to 15%	✓ Yes ☐ No
	(LDA & RCA only) Slopes greater than or equal to 15% development shall be prohibited in these areas (section 8-	shall be shaded on the plat and 2.07 Steep Slopes)



Subdivision Application

Calvert County, Maryland Department of Planning and Zoning 150 Main Street

Prince Frederick, MD 20678

Phone: (410)535-2348 or (301)855-1243 TDD: (410)535-6355

Fax: (410)414-3092 Email: pz@co.cal.md.us

Noticel Separate applications must be filed with the following agencies if applicable to the subdivision. Other agency permits may be necessary:

- Environmental Health for drainfield percolation tests
- State and Federal wetland permits for developments involving wetlands
- State Highway Administration for access permits on state roads

Note: All information must be completed if applicable. Incomplete applications/forms/checklists, plans, etc. will result in the entire submittal package being returned to the engineer.

Project Name: THE HARBOUS AT SOLOMNS Planning and Zoning Case No: SD 07-05A (Assigned by P & Z at concept plan review) Type of Subdivision: Residential Commercial Industrial Mixed Use Subdivision Type: Major Minor (Major subdivisions involve more than 5 lots or a public road) Utilities: Public Sewer Septic System Public Water Well FOR RUR, R-1, R-2 ZONE: Maximum # of Conventional Lots: +4 = 'new base density TDR Conventional Lots + Transfer Zone Lots (if permitted) = 2 Total lots requiring TDR's Total Lots Proposed: (1+2 total) TOWN CENTER - (see Town Center Chart) Maximum Density of units per acre Proposed Density 257_ = 3.63 units per acre Number of TDR's required: O (AGE DESTRUCTED) Manditory clustering per Articles 2-10.01.E or 5-2.01 Optional Clustered subdivision yes No Average Lot Size: 72865F Total Acreage (29.49) - Wetland acreage 0.111 = 69.380 acreage to calculate den consultance of the cons	ROJEC	T INFORMATION	
Planning and Zoning Case No: SD OZ-OBA (Assigned by P & Z at concept plan review) Type of Subdivision: Residential Commercial Industrial Mixed Use Subdivision Type: Major Minor (Major subdivisions involve more than 5 lots or a public road) Utilities: Public Sewer Septic System Public Water Well FOR RUR, R-1, R-2 ZONE: Maximum # of Conventional Lots: +4 = new base density TDR Conventional Lots + Transfer Zone Lots (if permitted) 2 Total lots requiring TDR's Total Lots Proposed: (1 + 2 total) TOWN CENTER - (see Town Center Chart) Maximum Density of units per acre Proposed Density 257_ = 3.63 units per acre Number of TDR's required: C (AGE DESTRUCTED) Manditory clustering per Articles 2-10.01.E or 5-2.01 Optional Clustered subdivision yes Mono Average Lot Size: 7.2865F Total Acreage 9.49] - Wetland acreage 11 = 6.7.380 acreage to calculate den 1. Total Acreage in Lots: 42.153 2. Total Acreage in Lots: 42.153 2. Total Acreage in RW & Widening Strips: 15.978 4. Total Acreage in RW & Widening Strips: 15.978 4. Total Acreage in Recreation Area: SEE Community PAGE STRIP	Project Nar	ne: THE HARBOURS AT SOLOMONS	
TDR Conventional Lots + Transfer Zone Lots (if permitted)= 2 Total lots requiring TDR's	Planning ar ype of Sul Subdivision Itilities: 🏽	Assigned by P & Z at concept plan review) Dedivision: Residential Commercial Industrial Mixed Use Type: Major Minor (Major subdivisions involve more than 5 lots or a public road) Public Sewer Septic System Public Water Well	
TDR Conventional Lots + Transfer Zone Lots (if permitted)= 2 Total lots requiring TDR's	laximum #	of Conventional Lots: ÷4 = 1pew base density	
TOWN CENTER — (see Town Center Chart) Maximum Density of 7 units per acre Proposed Density 252 = 3.63 units per acre Number of TDR's required: 0 (AGE DESTRICTED) Manditory clustering per Articles 2-10.01. E or 5-2.01 Optional Clustered subdivision yes no Average Lot Size: 7,2865 Total Acreage 9.49 - Wetland acreage 1.11 = 69.380 acreage to calculate den 4.2.153 Total Acreage in Lots: Community PARCELS Total Acreage in Open Spece*: 11.360 Total open space provided: (items 3,4,6) Total Acreage in RW & Widening Strips: 15.978 Total Acreage in Recreation Area: 15.978 Total Acreage in Recreation Area: 25.252 Total Acreage in Residue (if any): 28.252 Total Acreage: 97.743 (items 1-6 should equal this amount) Multi-Family Subdivision Information (if applicable): If subdivision involves multi-family units provide the number of units and the density. To obtain the density divide the total number units by the acreage involved with each unit type): Townhouses: (Density Units per acre)	DR Conve	ntional Lots + Transfer Zone Lots (if permitted)= 2Total lots requiring TDD	
Proposed Density 257. = 3.63 units per acre Proposed Density 257. = 3.63 units per acre Number of TDR's required: © (AGE PESTRACED) Manditory clustering per Articles 2-10.01.E or 5-2.01 Optional Clustered subdivision yes \(\) No Average Lot Size: 1.2865F Total Acreage 69.49 - Wetland acreage 0.111 = 69.380 acreage to calculate den 1. Total Acreage in Lots: 42.153 2. Total Acreage in Open Space*: 11.360 Total open space provided: (items 3,4,6) ("not counting RW or private lanes or rec area) 3. Total Acreage in RW & Widening Strips: 15.978 4. Total Acreage in Private Lanes: N/A 5. Total Acreage in Recreation Area: SEE Community PARCELS 6. Total Acreage in Residue (if any): 28.252 Total Acreage: 97.743 (items 1-6 should equal this amount) Multi-Family Subdivision Information (if applicable): If subdivision involves multi-family units provide the number of units and the density. To obtain the density divide the total number units by the acreage involved with each unit type): Townhouses: (Density Units per acre)		Lotal Lots Proposed: 21.2	
Average Lot Size: 7,2865F Total Acreage 69.49 - Wetland acreage 6.11 = 69.380 acreage to calculate den 1. Total Acreage in Lots: 42.153 2. Total Acreage in Open Space*: 11.360 Total open space provided: (items 3,4,6) 3. Total Acreage in R/W & Widening Strips: 15.978 4. Total Acreage in Private Lanes: N/A 5. Total Acreage in Recreation Area: SEE community PACCES 6. Total Acreage in Residue (if any): 28.252 Total Acreage: 97.743 (items 1-6 should equal this amount) Multi-Family Subdivision Information (if applicable): If subdivision involves multi-family units provide the number of units and the density. To obtain the density divide the total number units by the acreage involved with each unit type): Townhouses: (Density units per acre)		d Density 252 = 3.63 units per acre Number of TDR's required: O (AGE DESTRICTED)	
Average Lot Size: 7,2865 Total Acreage (9.49) - Wetland acreage (9.11) = (9.380) acreage to calculate den 1. Total Acreage in Lots: 2. Total Acreage in Open Space*: (*not counting RW or private lanes or rec area) 3. Total Acreage in RW & Widening Strips: 15.978 4. Total Acreage in Private Lanes: 5. Total Acreage in Recreation Area: 15.978 6. Total Acreage in Residue (if any): 28.252 Total Acreage: 97.743 (items 1-6 should equal this amount) Multi-Family Subdivision Information (if applicable): If subdivision involves multi-family units provide the number of units and the density. To obtain the density divide the total number units by the acreage involved with each unit type): Townhouses: (Density Units per acre)	landitory c	lustering per Articles 2-10 01 F or 2 5 2 01	
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2. Total Acreage in Open Space*: [1.360] Total open space provided:(items 3,4,6) 3. Total Acreage in R/W & Widening Strips:	. Total Ad	reage in Lots: 42. 153	у
(*not counting RW or private lanes or rec area) 3. Total Acreage in R/W & Widening Strips: 4. Total Acreage in Private Lanes: 5. Total Acreage in Recreation Area: 6. Total Acreage in Residue (if any): 7.743 (items 1-6 should equal this amount) Multi-Family Subdivision Information (if applicable): If subdivision involves multi-family units provide the number of units and the density. To obtain the density divide the total number units by the acreage involved with each unit type): Townhouses: (Density Units per acre)		reage in Open Space *:	
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5. Total Acreage in Recreation Area: 5. Total Acreage in Residue (if any): 7.743 (items 1-6 should equal this amount) Multi-Family Subdivision Information (if applicable): If subdivision involves multi-family units provide the number of units and the density. To obtain the density divide the total number units by the acreage involved with each unit type): Townhouses: (Density units per acre)	Total Ac	eage in R/W & Widening Strips: 15.978	
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Townhouses: (Density units per acre)	ulti-Family	and a mortifation (ii applicable).	
Townhouses: (Density units per acre)	If subdiv	ision involves multi-family units provide the number of units and the density. To obtain the	
(Density Units per acre)		and doledge involved with each unit typo).	
Duplexes: (Density units per acre)	Apartme	ents: (Density units per acre) (Density units per acre)	

pocation (Postal Area / City): Dowell imary Zoning District: TC Overlay Zoning/Subdistrict: E1 & E3 pad Trontage(s): Dowell Zoap pad Type: SHA County Private Election District: L Community Planning District: 17 Subdivision within Critical Area?: Myes No If so, which district? MIDA LDA LDA3 RCA Acreage in Critical Area: 91.743 arcel Information (parcels included in the subdivision): Tap Map. No Parcel No. Tax D No. Lot (if any) Block (if any) Section (if any) 44 294 O O 2185 Resolution # Action Date purrent or Past Applications (if any): Application Case # Resolution # Action Date Rezoning Board of Appeals Subdivision Transfer Zone Agricultural Preservation District Historic District Historic District Historic Sites Survey Previous Site Plan Review Other Other Other Other Intra-family for forest conservation requirements (Declaration of Intent required with final plat) Intra-family transfer for critical area requirements * * Requires Family Conveyance Affidavit with final plat)	PROPERTY	INFORM/	ATION					-	20 02	<u> </u>
imary Zoning District: TC Overlay Zoning/Subdistrict: £1 & E3 and Frontage(s): DewELL RoAD and Type: SHA County Private Election District: Community Planning District: 17 Subdivision within Critical Area?: Yes No If so, which district? DiDA LDA LDA LDA RCA Acreage in Critical Area: 91.743 arcel Information (parcels included in the subdivision): Tap Map. No Parcel No. Tax ID No. Lot (if any) Block (if any) Section (if any) 44 Z94 OI CIZI85 Juneation Case # Resolution # Action Date Application Case # Resolution # Action Date Board of Appeals Subdivision Transfer Zone Agricultural Preservation District Historic District Historic District Historic District Historic Sites Survey Previous Site Plan Review Other Other Other Other Intra-family for forest conservation requirements (Declaration of Intent required with final plat) Intra-family transfer for critical area requirements *										· · ·
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If so, which district?		DOMECC	KOAD							
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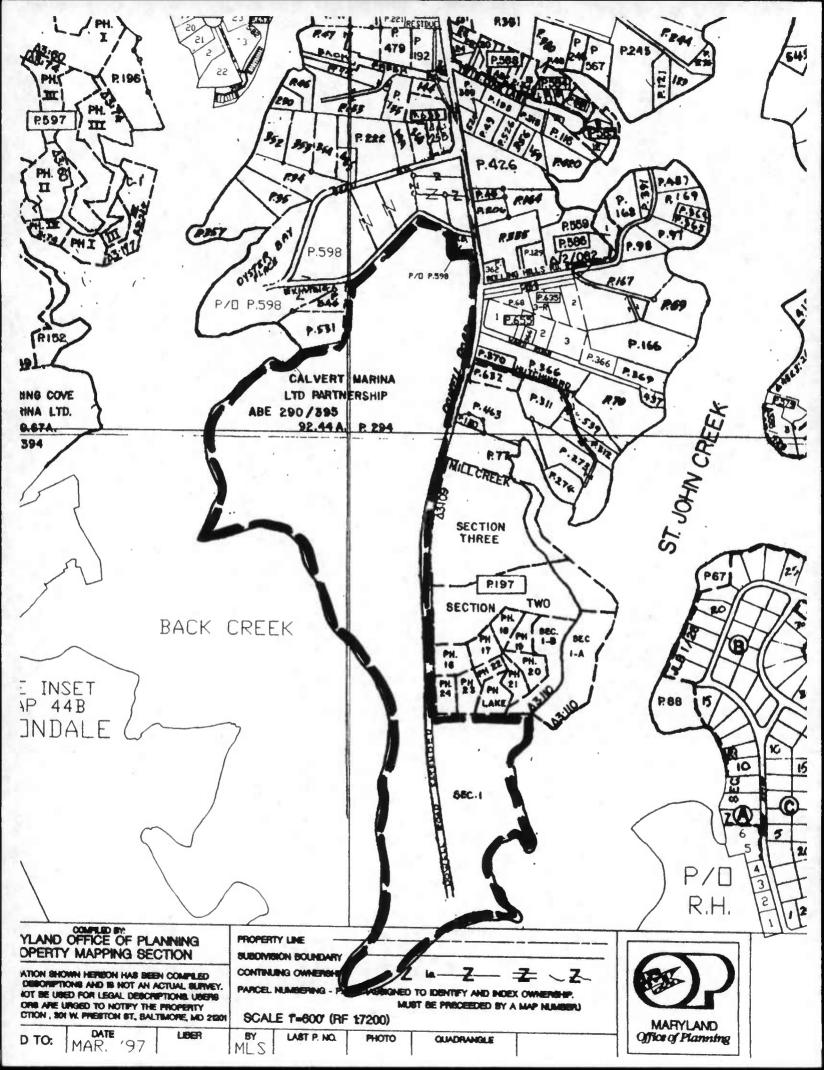
Calvert County Subdivision Application (Rev. 2/2004) File; subapp.doc

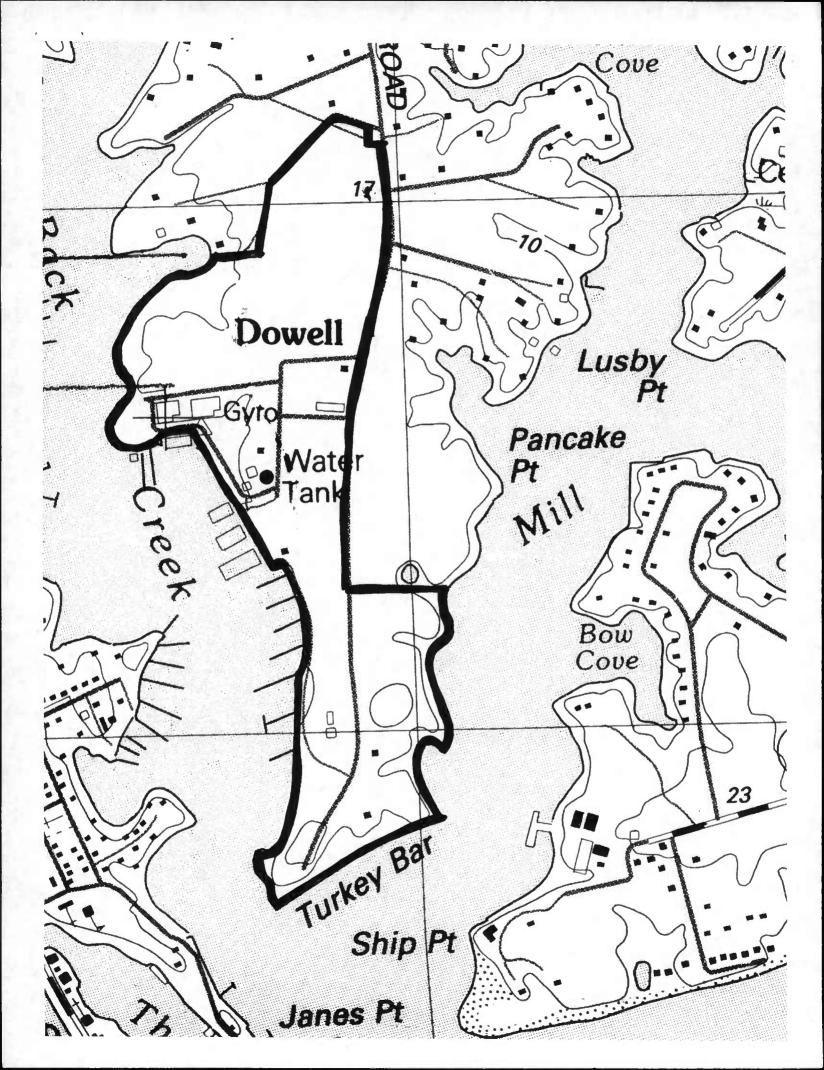
OWNER AUTHORIZATION

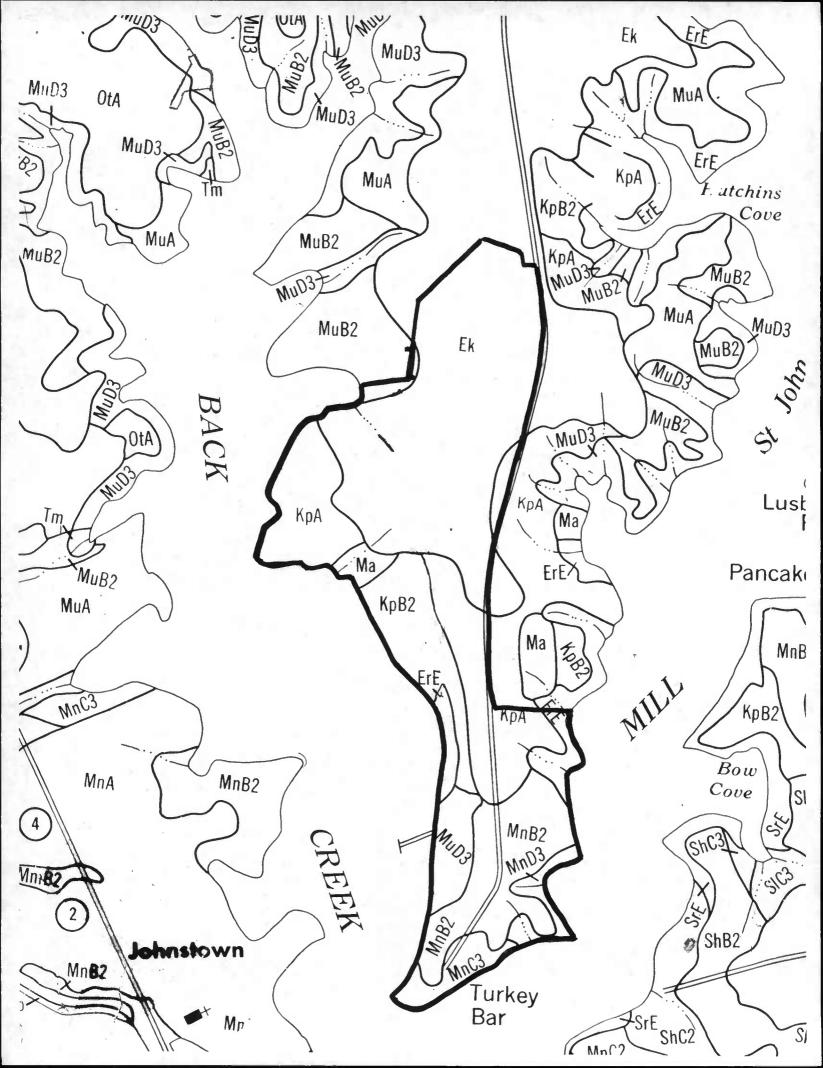
P&Z CASE NO: SD 0Z-08A

I/We the undersigned and the owners of the property described above do hereby submit this application for subdivision and authorize the agent(s) listed below to act on my/our behalf. I/ We also authorize and give consent to entry upon the subject property by review agencies staff and/or board members to the extent necessary to evaluate and act upon this application. In the event the applicant withdraws this authorization to enter, this application shall be deemed withdrawn in its entirety. (If there are more than two owners, please attach a supplemental signature form.)

Owner's corporation (if any): CALVERT MARINA	LLC
Print or type First Name: MATHEW GAMERILL	Last Name:
Signature: /// Na. / /	X Date: 1-23-06
Print or type First Name:	Last Name:
Signature:	Date:
Address: P.O. Box 157	Phone: 410 - 326 - 4251
City: Socomons State:	Mp. Zip Code: 20688
APPLICANT INFORMATION & AUTHO // We the undersigned do hereby submit this applicate below to act on my/our behalf. (If there are more than	
below to act on my/our behalf. (If there are more than form.)	two applicants, please attach a supplemental signature
Applicant's corporation (if any): CC GROUP, LI Print or type First Name: WALIAM	L-C
Signature: Signature:	Last Name: GETZALD
Print of type First Name:	Date: <u>1-23-ο ω</u>
Signature:	Last Name:
Address: BIZO WOODMONT AVE. #500	Date:
City Berry	Phone: 301-913-0404
State: M	10 Zip Code: 20814
AGENT CERTIFICATION -	
I certify that the information, attachments and plans subn knowledge and ability. I file this application and will act of Print or type First Name:	and applicant(s) listed above.
signature:	Last Name: OLIFF
Agent's corporation (if any): Coursey, Our	Date: 1-23-06
Address: P.O. Box 2209	ASSOCIATES, INC.
City Pa FREDERIC	$\mathbf{A} =$
City: PR. FREDERICK State: A	
City: PR. FREDERICK State: 10 Phone: 410-535-3101 Fax: 410-535-3103	
City: PR. FREDERICK State: A	
City: PR. FREDERICK State: 1.0.535-3103	









COLLINSON, OLIFF & ASSOCIATES, INC.

SURVEYORS • ENGINEERS • LAND PLANNERS

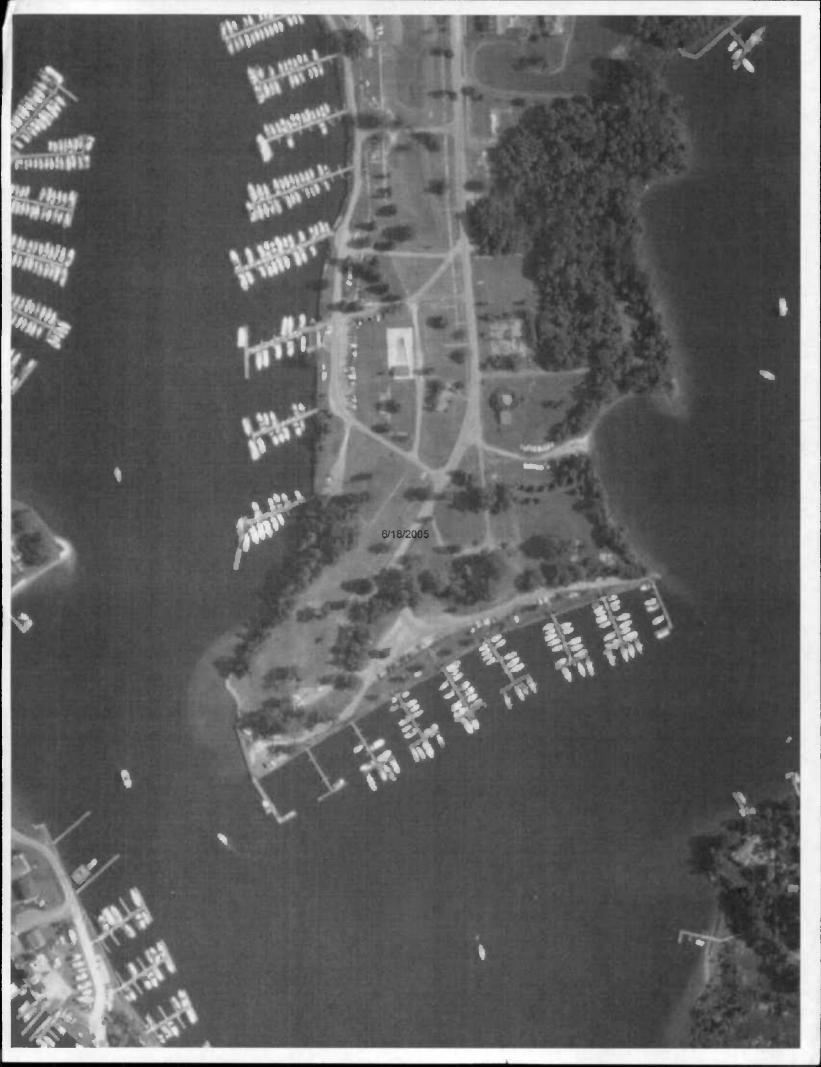
P.O. Box 2209 • Prince Frederick, Maryland 20678 410-535-3101 • 301-855-1599 • FAX 410-535-3103

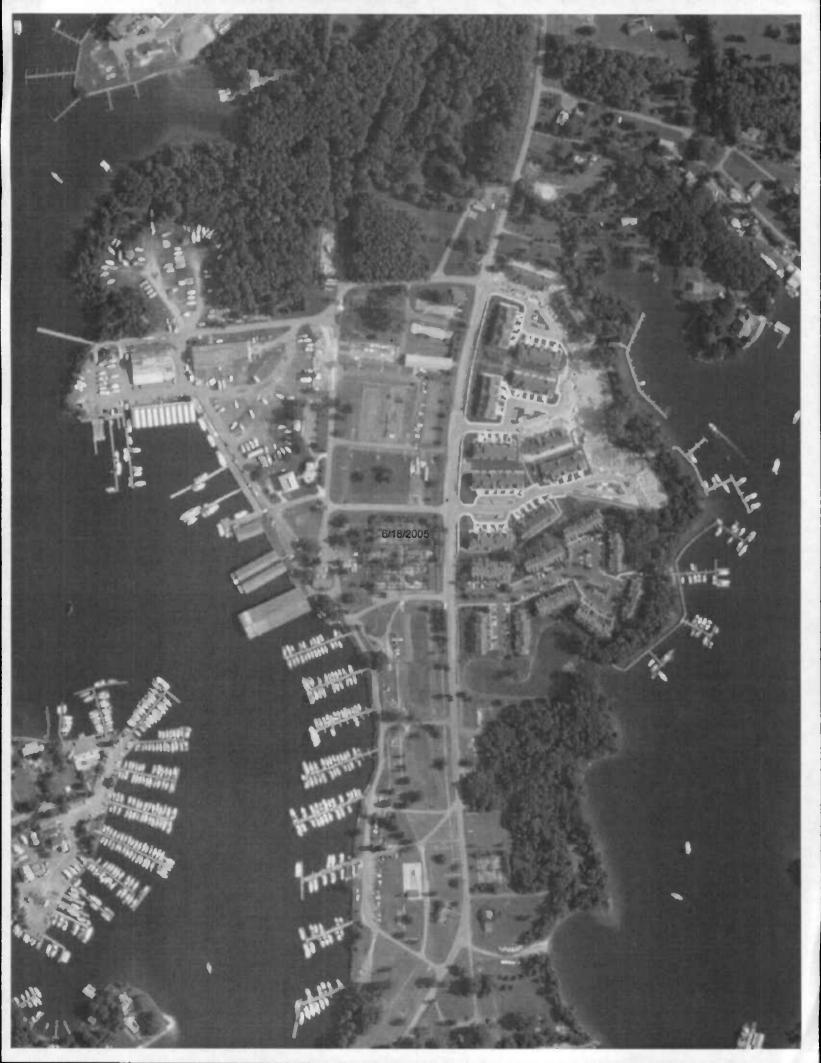
The Harbours at Solomons SD 02-08A Letter of Explanation

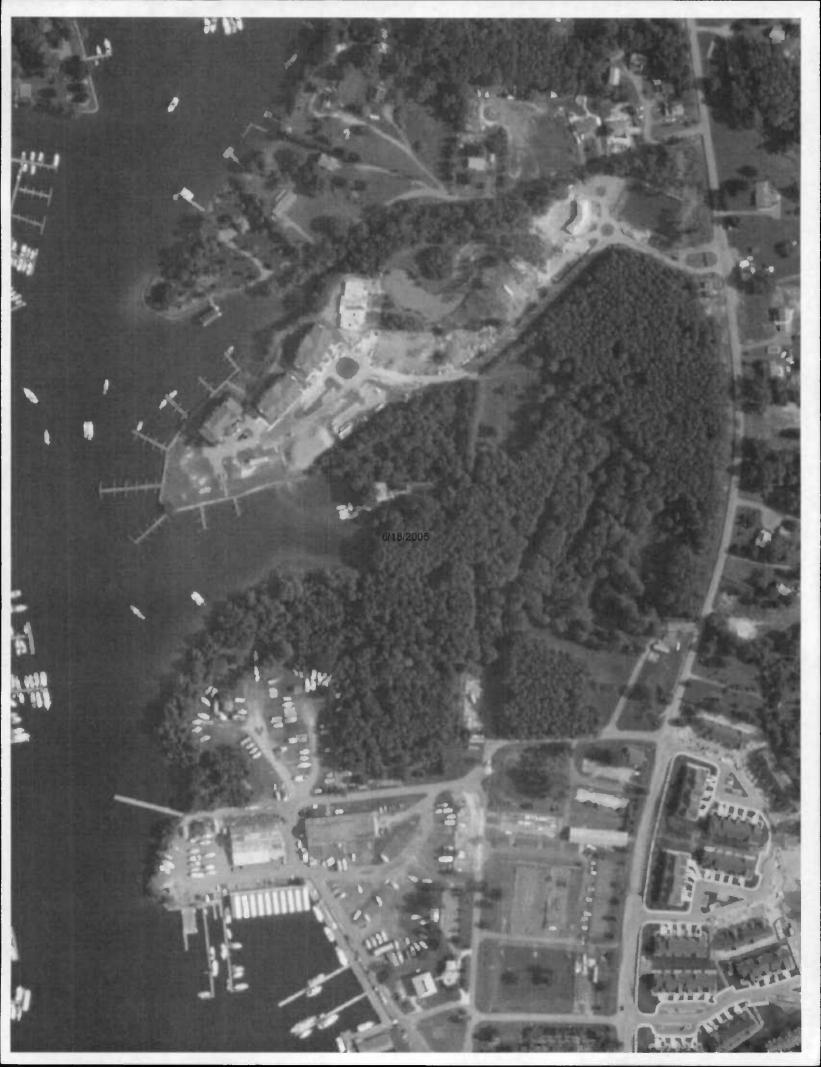
The Harbours at Solomons is a proposed 252 single family detached, age restricted, waterfront community located on the Dowell peninsula on the site of the former Naval Amphibious Training Base. Calvert Marina is currently operated on this site and will continue to operate as a neighbor to this community.

This will be designed as a neo-traditional community with beautiful streetscapes, on street visitor parking, and the use of access easements to allow rear entry garages for the majority of the units.

The old Commandant's house will be renovated and enlarged to be utilized as a Community Center. A swimming pool and fitness center will also be added. A walking path is proposed all along the water frontage, and 5 small park areas are proposed throughout the community. We are proposing these amenities in lieu of the standard recreation requirements of playing fields and paved courts to better meet the needs of the age group of the residents. There are also proposed boat slips available for the residents.









Solomons Harbor Project

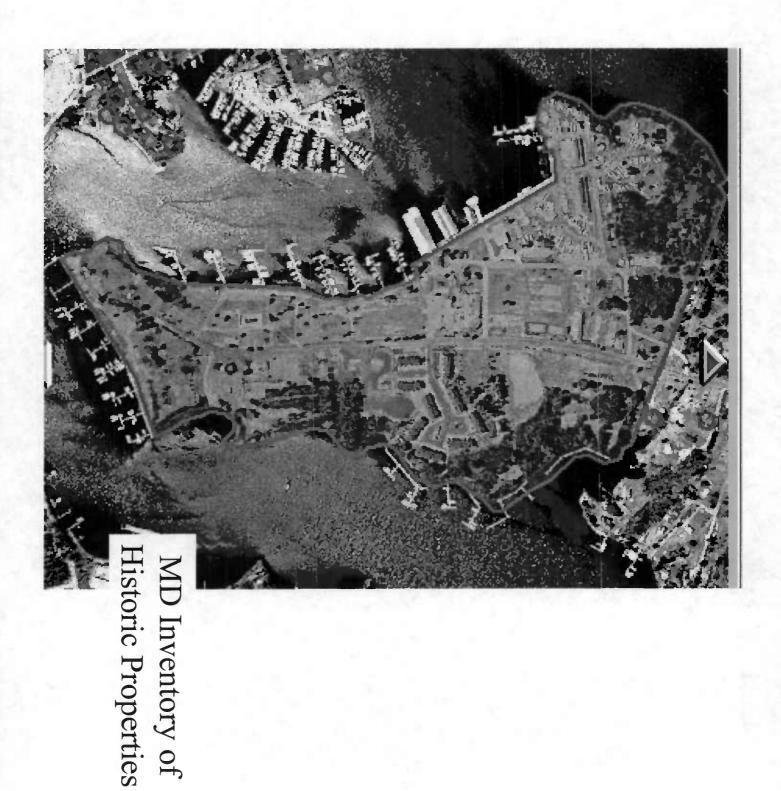
745A-5-1829-5657

CRITICAL AREA FORM

Please fill in the appropriate blanks or circle appropriate answer if the property is in the Critical Area (all land within 1,000 feet of the Mean High Water Line of the Chesapeake Bay, its' tributaries or the landward boundary of an adjacent wetland is considered to be within the Critical Area).

bee	Your application for development will not be considered complete until the following form has en filled out and submitted to the Department of Planning and Zoning.
OWN	IER'S NAME: Calvert Marina, LLC TELEPHONE # 410 326-4251
	PRESS PO Box 157, Solomons, MD 20688
	CATION OF PROPERTY TO BE DEVELOPED END of Dowell ROAD
	TAX MAP # 44 PARCEL # 294 LOT #
1.	Tax ID # 610/2/85
2.	Subdivision name Solomon's Harbon
3.	Property is designated:
	a. Intensely Developed (IDA) b. Limited Development (LDA) c. Resource Conservation (RCA)
	To find out what your peroperty is designated, consult the Critical Area Map in the Department of Planning & Zoning.
4.	Type of development being proposed. Circle all that apply.
	a. Residential b. Commercial c. Industrial d. Redevelopment Mixed
5.	Project category
	a. Existing lot c. Site Plan Subdivision which d. Subdivision which does not creates buildable lots create buildable lots
6.	Total acreage of property 95.84Ac
7.	Total acreage of property within the Critical Area
	IDA 95.84 LDA RCA
8.	Total acreage being disturbed within the Critical Area 80.3 Ac
SUBI	DIVISION
9.	Number of lots to be created in the Critial Area 246
10.	Number of dwelling units to be created in the Critical Area 243
	Minimum lot size in the Critical Area 3787 SF
	Maximum lot size in the Critical Area 12,300 SF
	Average lot size in the Critical Area 6405 SF

14.	Linear length of waterfront in feet of original parcel 8,485 ft	
	Is this an intrafamily transfer?	yes no
16.	If a subdivision, is cluster development being used?	yes /(no)
	If yes, how many acres of open space will be created by the clustering?	
7.	If a subdivision, how many acres of recreation area will be provided?	Ac
ROW	TH ALLOCATION	
8.	Is use of the growth allocation necessary?	yes / (no)
9.	How many acres of growth allocation are you requesting?	
٥.	Are all non-water dependent uses more than 300 feet from the water?	yes / no
	Number of acres of growth allocation approved off use only)	yes:/no
ETL	ANDS	
2.	Identify wetlands (tidal and non-tidal rivers, bays, streams, marshlands, swa etc.), hydric soils, and highly erodible soils on plat.	mps, bogs,
5.	Is site adjacent to or does it include within its boundary any tidal waters or wetlands or non-tidal streams that are tributaries to tidal waters?	yes/ no
	If yes, identify wetland buffer on plat according to section 4-4.05,C and 4-4.05,D,6 of the Zoning Ordinance.	
	Is site adjacent to or does it include within its boundary any non-tidal waters or wetlands?	yes (no
	If yes, identify wetland buffer on plat according to section 4-4.06,D.	
5.	Is any disturbance to the buffer proposed?	(yes)/ no
	If yes, then either a Buffer Management Permit or a variance may be necessary	
DRE	ST LAND/BUFFER	
5.	Is site within a Buffer Exempt area?	yea no
	If yes, what is the shortest distance between mean high water and any existing structure on adjacent lots or parcels? $40'$	
٠.	Is the following shown on plat?	yes / no
	Identify vegetated areas (marshes, forests) on plat.	
	a. How many acres of site are covered by forest? 32.14 de	
	b. How many acres of forest are proposed for clearing? 26.11Ac	
	c. How many acres of forest will be replanted on site? (LDA and maximum of 30% of the forest can be removed though replantings and/or Fe shall be required.	
В.	Is 15% or greater of the side covered with forest?	yes no
	(LDA and RCA, only) 15% of the site shall be maintained or planted in trees and this fact shall be recorded with the record plat. How many acres will be replanted?	
9.	Does the site have slopes greater than or equal to 15%?	yes /(no)
	(LDA and RCA, only) Slopes greater than or equal to 15% shall be shaded on	
	the plat and development shall be prohibited in these areas (section 4-8.07,	,6).



- Gusting grandfathered devel. - 150 townhouses; 54 built, 96 in process - remainder designed as new-trad. - 330 units non-grands. 40 trunhouses 240 SFD 35 acres green space IDA - 120 acre pete - existing marina will be I lot - old navy base, became marina - ACOE delineation done & approved 6. requires 50 # buffer for NTN - not to be ago-restricted - BEA area bulkheaded, bldgs along waterfront, incl. restaurant recreation facility to be on s. and - 6. BEArego are under old CAC policy minimum 30 petback if not water-dependent - Co. would allow equal exchange of impervious in BEA - keven to show existing mp, proposed, to be removed, etc.

- infiltration difficult is fill & clay poils

- rd. to for fire access a maxina may need variance

MAJOR SUBDIVISION TRANSMITTAL

Department of Planning and Zoning

Calvert County

150 Main Street

Prince Frederick, MD 20678

RECEIVED

SEP 19 2002

CHESAPEAKE BAY

CRITICAL AREA COMMISSION

Date: Thursday, September 05, 2002

Memo To: Principal Planner - Subdivision

Environmental Reviewer

House Addressing County Engineer Traffic Engineer

SHA

Historic District Commission

Water and Sewer Health Department Board of Education

SMECO Verizon

Also To: Critical Area Commission

DNR - Coastal Resources Division MDE - Tidal Wetlands Division

DNR - Fish, Heritage and Wildlife Administration

Memo From: Olivia Vidotto - Planner I 4-379

Subject: SD-02-08

Project Name: Solomons Harbor

Road Frontage Dowell Rd.

Lots Proposed: 246

Tax Map No: 44 Parcel No: 294 Tax ID No: 01012185

The attached subdivision has been submitted for preliminary plan approval. It is requested that your agency review the attached plan and furnish in writing your comments within the scope of your agency's

responsibility by:

Thursday, October 03, 2002

Comments:



Subdivision Application

Calvert County, Maryland Department of Planning and Zoning 150 Main Street

Prince Frederick, MD 20678

Phone: (410)535-2348 or (301)855-1243 TDD: (410)535-6355

Fax: (410)414-3092 Email: pz@co.cal.md.us

Notice! Separate applications must be filed with the following agencies if applicable to the subdivision. Other agency permits may be necessary:

- Environmental Health for drainfield percolation tests
- State and Federal wetland permits for developments involving wetlands
- State Highway Administration for access permits on state roads

Note: All information must be completed if applicable. Incomplete applications/forms/checklists, plans, etc. will result in the entire submittal package being return

PROJECT INFORMATION	
FOR RUR, R-1, R-2 ZONE: Project Name: Solomon's HARbor	
Planning and Zoning Case No: Type of Subdivision: Residential Commercial Industrial Mixed Use Subdivision Type: Major Minor (Major subdivisions involve more than 5 lots or a public road) Utilities: Public Sewer Septic System Public Water Well Maximum # of Conventional Lots: Total Lots Proposed: **Total Lots Proposed: **Total Lots Propos	
Town Center – (see Town Center Chart) Maximum Density of 95 = 1 units per acre Proposed Density 246 = 2.6 units per acre Number of TDR's required: 275 Manditory clustering per section 5-1.03 yes x no Clustered subdivision yes x no Average Lot Size:	
Total Acreage in Open Space: Total Acreage in Open Space: Total Acreage in Right-of-Ways: Total Acreage in Private Lanes: Total Acreage in Recreation Area: (Only required for subdivisions over 50 lots or per town center requirements) Total Acreage in Residue (if any): Total Acreage: 95.84 (items 2-7 should equal this amount) Multi-Family Subdivision Information (if applicable):	
If subdivision involves multi-family units provide the number of units and the density. To obtain the density divide the total number units by the acreage involved with each unit type): Townhouses: (Density units per acre) Apartments: (Density units per acre) Duplexes: (Density units per acre)	

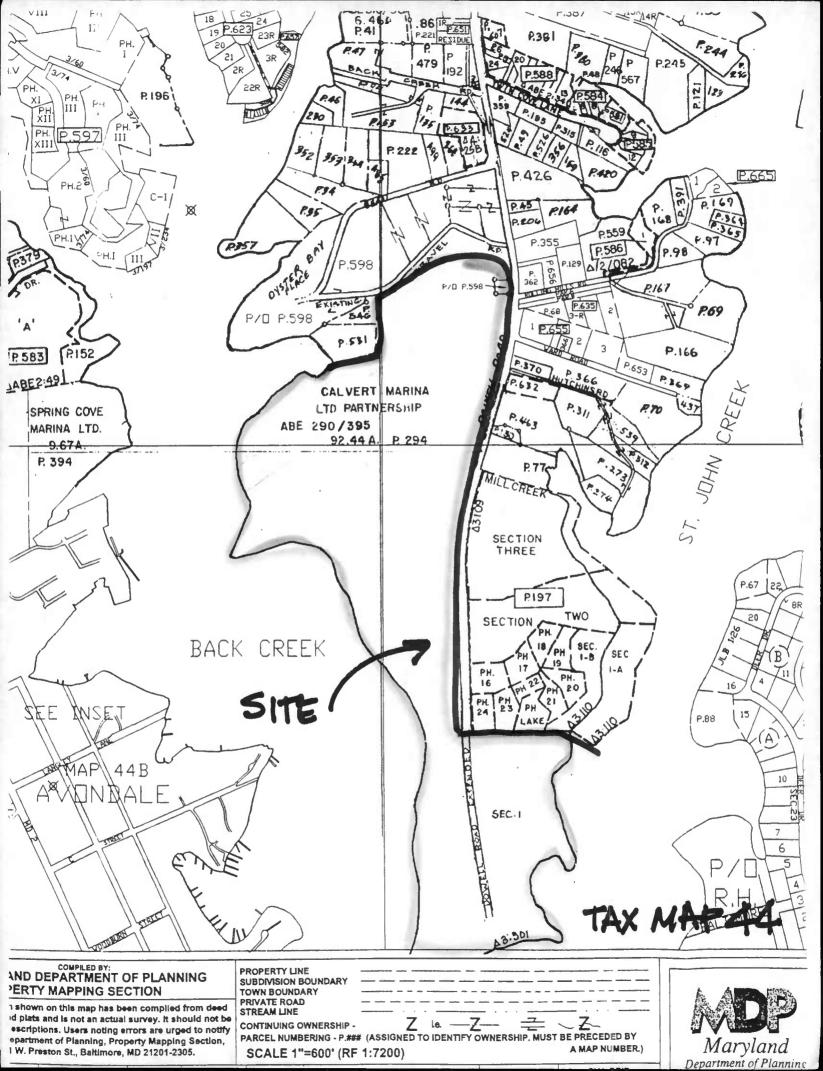
PROPERTY INFORMATION			
THOUSERT INFORMATION		0	& Z CASE NO:
		1	a 2 CASE NO:
Location (Postal Area / City): Solow	NOUS		
Primary Zoning District: Solomons Tour	-C. traca		+1 · >
Poad Frontago(a):	Verlay	Zoning(Subdistrict:	El à E3
Read Frontage(s): Dowell	KOAO		
Road Type: SHA County F	rivate Election	District Ol Com	- A - C1
Is Subdivision within Critical Area?: 💢 Yo	as The	Comir	nunity Planning District:
If so which districts Rich	es No		
If so, which district? IDA	DA LDA3	RCA Acreage	in Critical Area: 95 84
Parcel Information (parcels included in the	subdivision):	•	12.07
Tap Map. No Parcel No. Tax ID		1 -4 / 5	· · · · · · · · · · · · · · · · · · ·
44 294 01012		Lot (if any) Block	(if any) Section (if any)
Current or Past Applications (if any):			
Application	I Cara d		
Rezoning	Case #	Resolution #	Action Date
Board of Appeals	1		
Subdivision			
Transfer Zone			
Agricultural Preservation District			
Historic District			
Historic Sites Survey Previous Site Plan Review			
Other			
Other			
Family 0			
Family Conveyance - Check any & all bo	xes if applicabl	e:	
For access & R/W *			
□ For lete			
For lots created that would require purch 11/2/99) *	ase of TDR's (o	nly 3 allowed per parce	I - first 3 lots asseted after
11/2/99) *		, paroc	i – mat a lots created after
C lates 6 12 c			
Intra-family for forest conservation requir	ements (Declara	ation of Intent required	with final plan
		or montrequired t	with final plat)
Intra-family transfer for critical area requi	rements *		
*Requires Family Conveyance Affidavit	with final allow		
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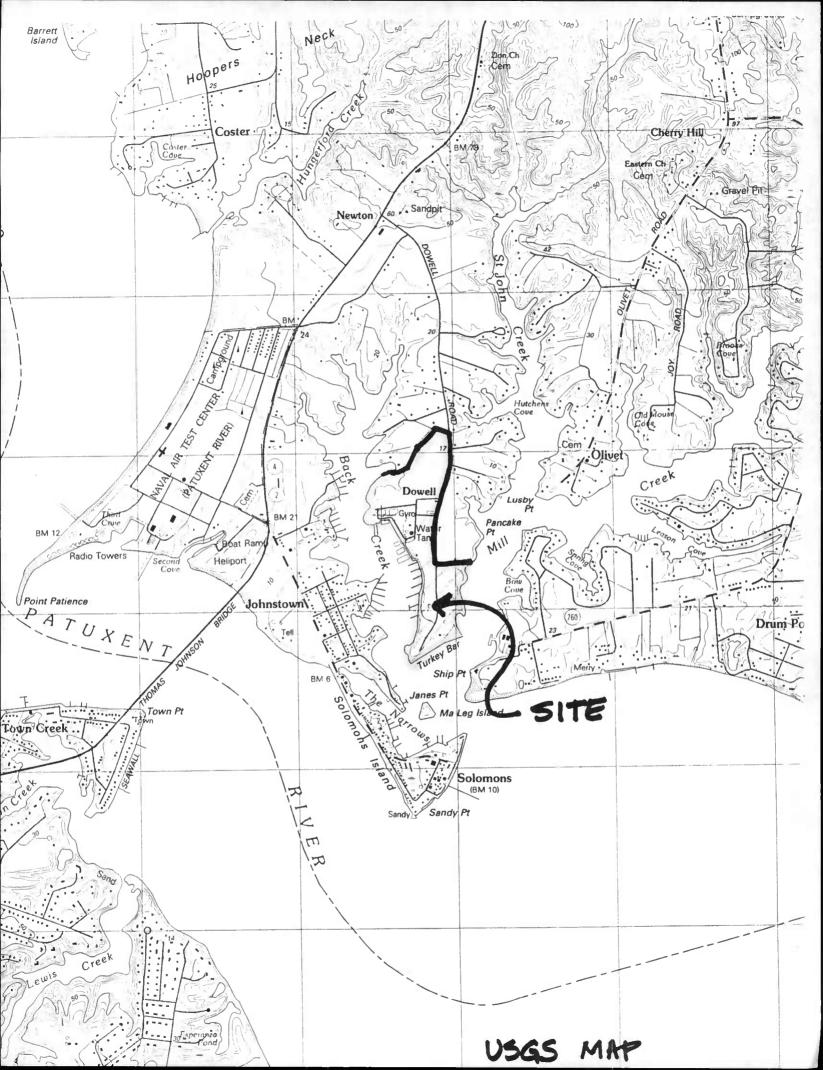
OWNER AUTHORIZATION P&Z CASE NO:	
I/We the undersigned and the owners of the property described above do hereby submit this applicat for subdivision and authorize the agent(s) listed below to act on my/our behalf. (If there are more than two owners, please attach a supplemental signeture form.)	on
Signature: Date: 8-8-02	
Owner's corporation (if any): CALUCAT MARINI (i.e.	
Print of type First Name: 1/1/17/1/6/ MI: Last Name: 1. A 1/18 A 1.	
Signature: Date:	
Print or type First Name: MI: Last Name:	
Address: Dowell Road, P.O. Box 157 Phone: 410 326 4251	9
City: Solomons State: MD Zip Code: 20688-0157	1
	1
— APPLICANT INFORMATION & AUTHORIZATION (If different than owner) —	
If We the undersigned do hereby submit this application for subdivision and authorize the agent listed below to act on my/our behalf. (If there are more than two applicants, please attach a supplemental signature form.)	re
Signature: Date:	
Applicant's corporation (if any): U.S. Homes Corp	
Print or type First Name: Last Name:	
Signature: Date:	
Print of type First Name:	
Address: 10230 New Hampshire Ave Suite 300 Phone: 301 1/31 2400	
Address: 10230 New Hampshire Ave, Suite 300 Phone: 301 431 2400 City: Silver Springs State: MO Zip Code: 20903	
215 code. <u>2010</u>	
AGENT CERTIFICATION	
I certify that the information, attachments and plans submitted herewith are true and correct to the best of my knowledge and ability. I file this application and will act on behalf of the owner(s) and applicant listed above.	st (s)
Signature: Signature:	
Print or type First Name: Parraick Last Name: Mubb	
Agent's corporation (if any): Dear Tolerand	
Agent's corporation (if any): Day Tech ENGINEERING, LLC Address: 44425 Pecan Court, Sute 153	
City: California State: MD Zip Code: 20619	
Phone: 301 863 0333 Fav: 301 863 7410 F :: 200de: 20619	
Phone: 301 863 0333 Fax: 301 863 7460 Email: pat@daytechengineering.com	
Agent Notes:	

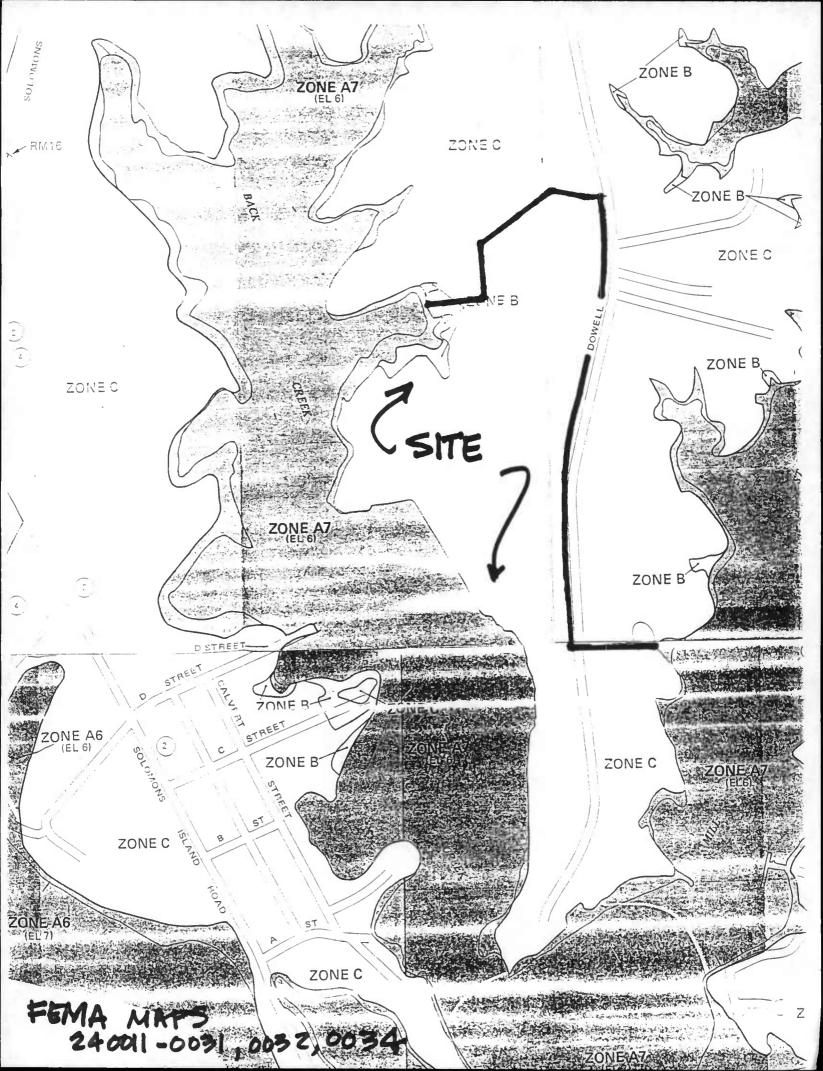
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Page 3 of 3

Calvert County Subdivision Application (6/2001) File: subapp.doc







SUBDIVISION LETTER OF EXPLANTATION

	Planning and Zoning Case No
1.	Reduction / waiver request for any of the following (please list with an explanation an justification); wetlands report, wetland buffer, swm and front roadway buffer. Swm: Request use of water Guality inlets along Creek View Drive
2.	Focal Point Clubhouse, Marina
3.	Recreation Requirements 3 playing fields, 2 mini parks , 2 paved a reas 48,600 st total
	Recreation Proposed 3 playing fields, 2 minipants, 2 paved a reas
4.	Fencing Requirement (list all adjacent parcels by tax map and parcel number that are in an agricultural program or assessed as an agricultural use
5.	List all structures, barns, houses, etc. that exist, note if any 50 years or older and specify retention or removal Many structures on Site date to the 1940's
	Comments/explanation for anything not listed above that needs to be brought to any review agencies attention: Location of fire hydrauds have been coordinated with Public Safety



CALVERT COUNTY DEPARTMENT OF PLANNING & ZONING

150 Main Street
Prince Frederick, Maryland 20678
Phone: (410) 535-2348 • (301) 855-1243

Director
Gregory A. Bowen

May 26, 2006

Board of Commissioners Gerald W. Clark David F. Hale Linda L. Kelley Wilson H. Parran Susan Shaw

Critical Area Commission Attn: Ms. Kerrie Gallo 1804 West Street, Suite 100 Annapolis, MD 21401

Subject: Harbours at Solomons

Dear Kerrie,

Enclosed is the Staff Report for Harbours at Solomons that you requested from Olivia on 18 May 2006.

If you need additional information, please do not hesitate contacting us.

Sincerely,

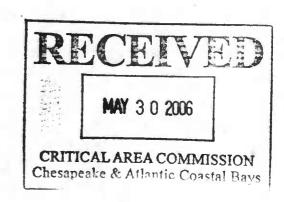
Becky Parkinson Office Assistant II

enc

RECEIVED

JUN 1 9 2006

CRITICAL AREA COMMISSION



Mailing Address: 175 Main Street, Prince Frederick, Maryland 20678

Maryland Relay for Impaired Hearing or Speech 1-800-735-2258



WM. P. Gerald, Jr. "Bill"

8120 Woodmont Avenue, Suite 300 Bethesda, Maryland 20814

> (301) 913-0404 Fax: (301) 913-5482

www.classiccommunitycorp.com wgerald@classiccommunitycorp.com

TEL:: 410-228-7117

FAX: 410-228-2735

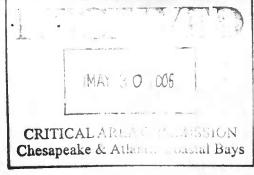
e-mail: kbe@amainc.org

Andrews, Miller & Associates, Inc. CONSULTING ENGINEERS AND SURVEYORS

KENNETH B. EATON

Sr. Project Manager

401 Academy Street, Suite 1 Cambridge, MD 21613



Planning Commission Presentation 05-17-06

SD 02-08A, Harbours at Solomons

The site is located at the end of Dowell Road in Dowell. Oyster Bay Condominiums is located to the north of the site. Windward Harbour Condominiums and Mill Creek Condominiums, both of which were derived from the original parent tract, are located on the east side of Dowell Road across from the property. The site now consists of a 97.743± acre residue parcel (Parcel 294). The parcel is located within the Sub-districts, E-1 and E-3 of the Solomons Town Center. The site is also located within the Critical Area's Intense Development Area (IDA). The application was accepted as adequate for distribution on February 14, 2006 and is therefore, subject to the Zoning Ordinances in effect prior to the May 1, 2006 amendments.

The property is located on a peninsula that is surrounded by Back Creek and Mill Creek. The site is currently developed with numerous structures including approximately 337 commercial piers. Some of the existing buildings support marina related businesses including the Southern Maryland Sailing Association, Washburn's Boatyard, and Custom Marine Fabrications. There is also full service restaurant and carryout located on-site as well as the Dowell Post Office. The property also contains a number of buildings/structures that were constructed as part of the U.S. Navy Amphibious Training Base (ATB), which operated from 1942 – 1945 (see HDC comments attached). Some of these structures have been listed on the Maryland Inventory of Historic Properties under CT-800. The applicant is proposing adaptive reuse of one of the structures, the Senior Officer's Quarters, which will be renovated and incorporated into a proposed community center. The HDC applauds this decision and suggests that the applicant consider the benefits of designating the Officer's Quarters as a Historic District. In addition, there are other structures identified by the HDC that are worthy of preservation. Accordingly, the HDC requests that if these buildings cannot be integrated into the project, that they be offered for relocation.

Within the Town Center, non-tidal wetlands are not required to be deducted prior to calculating density. The subdivision application is for 252 single-family detached lots on 69.491± acres, leaving a 28.252 acres residue. The residue will continue to support most of the existing commercial businesses located on the site. Consequently, the residential density can only be calculated on the 69.491 acres. Within the Solomons Town Center, the residential density may be increased to no more than seven units per acre via Transfer Zone. There is no density limit applied within the Critical Area, IDA. With 252 lots, the proposed density equates to 3.63 units per acre. The maximum conventional density in the Solomons Town Center is one unit per acre. The density may be increased to no more than seven units per acre via Transfer Zone and the use of five Transfer Development Rights (TDR's) for each of the 183 units above the conventional density (69 units), for a total of 915 TDR's. The applicant however, is choosing to designate the development as an "age-restricted" community; therefore, no TDR's shall be required.

The Solomons Zoning Ordinance does not set specific requirements for open space and recreation. Consequently, these requirements are taken from Article 7-1.06.S.3 of the Calvest County Zoning Ordinance. Per the Ordinance, 650 sq. ft. of neighborhood recreation must be

provided per unit of which 200 sq. ft. (of 1.157 acres) must be developed with specific recreational facilities. With 252 units, 163,800 sq. ft. (or 3.78 acres) of land suitable for neighborhood recreation must be provided with 50,400 sq. ft. (or 1.16 acres) developed with active recreational facilities. Based upon the criteria set forth in the Ordinance, three open play fields (or village greens) and 5, 292 sq. ft. of paved area facilities (i.e. shuffle board, hand ball, or other formal net games, etc.) must be provided. The applicant is proposing to substitute the standard recreational facilities for ones that better suit the needs of residents 55 years or older. Four mini-parks totaling 45,149 sq. ft. (or 1.036 acres) have been provided throughout the community. In addition, a 7.988 acre parcel will be provided near the southern tip of the property for a large community recreational center. The Senior Officer's Ouarters will be renovated and enlarged for use as a community center. There is an existing swimming pool onsite that is currently used by the Southern Maryland Sailing Association and the residents of Windward Harbour. This pool will be relocated adjacent to the community center. A fitness center will also be incorporated into the community center. Originally, it appears that a portion of the recreation area and improvements required for Mill Creek Condo development was located on the subject property. To resolve this conflict, the owner/applicant has conveyed a 1.0+ acre recreation area parcel (located on the south side of the lake) to the Mill Creek Council of Unit Owners. In addition, the applicant has extended an offer to the both Windward Harbor and Mill Creek homeowners associations to participate in the use of the community center and pool complex. The mini-parks and the 7.988 acre community center parcel will be conveyed to a Homeowner's Association.

As proposed, the subdivision layout does not provide the residents with any common area water frontage. The site's waterfront has been included within the residue parcel to be retained by the current landowner for possible future marina related development. The landowner has agreed to the provision of a pervious surfaced pathway to be constructed along the length of the waterfront that may be used by the residents. This pathway will run from the commercial marina on Back Creek to the Community Center and to Mainsail Way adjacent to Mill Creek. Portions of this pathway will be placed primarily within the Critical Area buffer. Sidewalks will also be provided along both sides of the public streets. Furthermore, the sidewalks will be widened to 8' along the west side of Dowell Road and the interior loop road, to serve as a bike lane.

Vehicular access to approximately 194 of the lots will be via 20' wide alleyways. These alleyways will range in length from 150' linear feet (serving 3 lots) to approximately 635' (serving 22 lots). The Calvert County Zoning Ordinance defines an alley as, "A public or private right-of-way that connects two or more streets and is intended to provide access to the rear or side of a building or lot. It is intended for local traffic only." Otherwise, neither the Solomons Zoning Ordinance nor the Calvert County Zoning Ordinance addresses the use alleyways within residential subdivisions. All lots with access to an alleyway will have rear-loaded garages. It should be noted that the alleyways have not been designed as separate right-of-ways parcels but instead, will be located over the common rear lot lines and situated within the rear setbacks of the lots. The alleyways will be managed and maintained by a Homeowners Association. The remainder of the lots (58) will have access from a public right-of-way with front load garages. Two of the public right-of-ways (Gerald Way and Mainsail Way) have been reduced to 30' in width, which is permitted under Article 7-1.06.D.8 of the Calvert County Zoning Ordinance. The reduction has also been, approved by the Dept. of Public Works with the condition that the streets be restricted to "one-way" movement.

Two exterior parking places must be provided on each lot and 15% overflow parking must also be provided within an easy walking distance of the majority of the units. The required overflow parking will be met primarily with parallel parking incorporated into the public right-of-way. In addition to the residential parking requirements, the applicant was required to document that there was adequate parking to serve the existing facilities, including 437 commercial boat slips (at a rate on one parking space per two slips, plus 15% overflow parking), two restaurants (at a rate of one parking space per 50 sq. ft. of floor area) and the proposed community center. A parking plan was submitted which indicated that based upon the requirements, 936 spaces will be required and 1,204 parking spaces will be provided. However, it should be noted that a portion of the parking spaces required for the commercial slips are located on the residue, adjacent to the commercial buildings that support the marina related businesses. Parking counts were not provided for these building/businesses so, the parking plan may have to be revised as part of the required Improvement Plan and additional parking spaces provided on the residue to accommodate these buildings/businesses.

There are two waterfront parcels (Parcels 531 and 548, currently under one ownership) located north of the commercial portion of the residue, which have limited access via an easement through the Oyster Bay Condo development. The contract purchaser of the parcels has requested additional access be provided through this subdivision proposal. The applicants have provided a 50'wide future right-of-way to the parcels. The use of this right-of-way, however, will have to be negotiated by the owner of the adjacent parcels.

Comments from the Utilities Bureau indicate that the subdivision is located within the existing boundaries of the Solomons Sanitary District Service Area and will be served by an existing water and sewer system. The project is in conformance with the current Calvert County Comprehensive Water and Sewer Plans for Water Planning Category W-1 and Sewerage Planning Category S-1 (Existing and/or Under Construction). Furthermore, the Solomons Sanitary District water supply and sewerage systems have adequate capacity to serve this proposed project, taking into account all existing and all approved proposed developments within in this service area. Upgrades and extensions of the systems including the addition of at least two pumping stations may be required. Construction plans for the extensions/upgrades of the water and sewer systems to serve this site must be approved prior to final plat approval.

As part of the subdivision approval, road improvements in the area of Dowell Road and MD Rt. 275 are anticipated through the State Highway Administration (SHA). The applicants have met with SHA to development a mitigation plan but SHA has not completed their traffic analysis. As with the water and sewer plans, staff is recommending that the road mitigation plan be approved prior to final plat approval.

With regard to the environmental aspects of the plan, the Critical Area Commission (CAC) has questioned whether subdivisions within the Buffer Exempt Area of the IDA is permissible under the County's Zoning Ordinances. It is their position that the 100' buffer should be maintained until such time that criteria for subdivisions within these areas have been approved by the CAC and adopted by the County. There is no wording within the applicable Zoning Ordinances that prohibits subdivision within the IDA buffer exempt area. Consequently, it is staff's position that although there is no specific criteria, there is an acknowledged 30' buffer required within the

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Buffer Exempt Area as set forth in the Solomons Master Plan and Zoning Ordinance to which the application must adhere.

The following agencies have submitted comments:

Engineering memo dated: 05-02-06

Transportation memo dated: 03-03-06 & 05-01-06

Environmental memo dated: 05-03-06, 05-08-06 & 05-11-06

Critical Area Com. memo dated: 03-21-06

MD Dept. Natural Res. memos dated: 03-16-06

MD Dept. of Environment memo dated: 003-16-06

SHA memo dated: 05-04-06

Historic District Com. memos dated: 04-28-06 & 05-05-06

Water and Sewer memo dated: 05-08-06

Army Corp of Engineers (JD): 08-22-01

The Department of Planning and Zoning has reviewed the proposed subdivision, SD02-08A, The Harbour at Solomons, 252 single-family detached lots and the review agency comments and recommends preliminary approval, subject to the following conditions:

Section I - Subdivision Layout and Design

- 1. Site development shall comply with all of the policies and requirements of the Solomon's Town Center Master Plan and Zoning Ordinance, and the Calvert County Zoning Ordinance in effect prior to the May 1, 2006 amendments.
- 2. The application shall be subject to meeting all of the requirements of the Critical Areas, IDA zone. This shall be noted on all subsequent plans and permits.
- 3. Per Article 5-2.02.C.3.c of the Calvert County Zoning Ordinance, each lot shall have a 25' minimum of frontage along a public right-of-way, except for two adjacent flag lots where the frontage for each lot may be reduced to 12.5' with the provision of a shared driveway and required easements.
- 4. Per Article 7 of the Calvert County Zoning Ordinance, the Planning Commission may

require sidewalks. The Solomons Master Plan also specifies the provision of sidewalks in developments containing over 10 lots, in order to maintain and enhance the sense of community. The Master Plan also specifies, "sidewalks are deemed necessary and all pedestrian circulation and automobile traffic should be separated and clearly defined". Therefore, staff recommends that sidewalks (min. 5' in width) be provided on both sides of all public rights of ways. Furthermore, the sidewalk shall be a minimum 8' in width along the west side of Dowell Road and along the primarily internal loop road to serve as a bike lane. Easements shall be provided on the final plats for the installation and maintenance of the sidewalks that are located outside the public rights-of-way. A note shall be added to the final plat indicating that the sidewalks shall be constructed by the developer and maintained by the individual property owner or the homeowner's association. A deed for the easement shall be submitted with the recording package.

- 5. Per the Solomons Master Plan and Zoning Ordinance (V-9) a bike path is required along the western side of Dowell Road. A minimum 8'wide bike path/lane shall be provided along Dowell Road and the primarily internal loop road (Creek View Dr., Riverwatch Dr. south of Dowell Rd. and Adm. Hewitt Drive, between Creek View Dr. and Riverwatch Dr.). The design of the bike path shall be included in both the road construction plans and Improvement Plans.
- 6. The Solomons Zoning Ordinance does not set specific requirements for open space and recreation. Consequently, these requirements are taken from Article 7-1.06.S.3 of the Calvert County Zoning Ordinance. A minimum 650 sq. ft. of neighborhood recreation must be provided per unit, of which 200 sq. ft. must be developed with specific recreational facilities. With 252 units, 163,800 sq. ft. (or 3.78 acres) of land suitable for neighborhood recreational must be provided with 50,400 sq. ft. (or 1.16 acres) developed with active recreational facilities.

The minimum recreational facilities to be provided are as follows:

Playing Fields/Village Greens:

150 sq. ft. per unit; min. size per field: 10,000 sq. ft., Dimensions: 100' X 100'.

252 (units) X 150 = 37,800 sq. ft. = 3.78 fields, which equates to 3 fields with 7,800 sq. ft. remaining to be applied to satisfy other rec. facilities.

Paved Area:

21 sq. ft. per unit

Dimensions: Min. ½ court: 50' X 42' (2,100 sq. ft) or whole court: 50' X 84 (4,200 sq. ft.) (i. e. basketball, shuffleboard, handball, or other formal net games, etc.)

252 (units) X 21 = 5,292 sq. ft. = two $\frac{1}{2}$ courts or one full court, with 1,092 sq. ft. remaining for other rec. facilities.

The Planning Commission may approve variations in size and dimensions of the required recreational facilities.

Other Recreation:

Facilities from remaining acreage (i.e. fishing piers, fitness trails outdoor theaters, etc.) 7,800 sq. ft. (open play) + 1,092 sq. ft. (paved area) = 8,892 sq. ft. of additional rec. area required

Proposed:

Playing Fields/Village Greens:

Four mini-parks (two under the 10,000 sq. ft. minimum) totaling 45,149 sq. ft. (or 1.036 acres), to be located throughout the community. In addition, a 7.988 acre parcel will be provided near to the southern tip of the property for a community recreational center.

Paved Area:

To be determined with Improvement Plan.

Other Recreation: (7,800 sq. ft).

Community Center with pool and fitness center (on the 7.988 acre parcel). The Senior Officer's Quarters will be renovated and enlarged for use as the Community Center. Actual size (sq. ft.) of community center and pool complex not yet determined. Provision of a pathway along the waterfront from the restaurant on Back Creek to the Mainsail Way on Mill Creek.

Staff has reviewed the proposed neighborhood recreation. With the exception of meeting the paved areas requirement, this proposal appears to be consistent with the intent of the Ordinance. The amount of land provided for recreation far exceeds the required acreage. With regard to the proposed recreational facilities, staff recommends that the remaining recreational facilities requirements be worked out as part of the required Improvement Plan to ensure that the facilities are appropriate for the age group of the residents. Staff also recommends that in accordance with the Environmental recommendations for planting within the pervious areas of the site, that the neighborhood recreation areas, including the 7.8 community center parcel, be landscaped as part of the Improvement Plan.

7. Per Article 7-1.06.D.6 of the Calvert County Zoning Ordinance, if a portion of a tract or an adjacent parcel is not subdivided, suitable access to street openings for eventual extension of the streets shall be provided.

There are two waterfront parcels, Parcels 531 and 548 (currently under one ownership) situated between the commercial residue and Oyster Bay Condominiums that have limited access via an easement through the Oyster Bay development. In accordance with the above provision, the contract purchaser of the parcels has requested additional access be provided through this subdivision proposal. The applicant has set aside a 50'wide future right-of-way, between Lots 18 and 19 (off of Creek View Drive) for access to the parcels. The 50' wide future right-of-way to Parcels 531 and 548 shall be shown and noted on the final plat.

- 8. The alleyways, as shown on the preliminary plan, shall maintain a minimum width of 20' (10' on each side of the common property line of the residential lots). The alleyways shall be constructed by the developer to standards set forth by DPW. The alleyways shall be managed and maintained by a Homeowners Association. Access easements for the alleyways shall be shown and noted on the final plats. A deed of easement shall be provided for recordation with the final plats.
- 9. Article 7-1.06.D.8 of the Calvert County Zoning Ordinance, two of the public rights-of-ways (Gerald Way and Mainsail Way) may be reduced to 30' in width provided that the streets be restricted to "one-way" movement and indicated as such on the final plats.

Section II- Minimum Requirements and Standards

Planning and Zoning - Subdivision Regulations and Zoning Ordinance

- 1. Provide signed certificates by the Health Officer, surveyor and owner on the final plat.
- 2. The subdivision application is for 252 single-family detached lots on approximately 69.491 acres, leaving a 28.252 acres residue. The residue will continue to support most of the existing commercial businesses located on the site. Consequently, the residential density can only be calculated on the 69.491 acres*. Within the Solomons Town Center, the residential density may be increased to no more than seven units per acre via Transfer Zone. There is no density limit applied within the IDA. With 252 lots, the proposed density equates to 3.63 units per acres. Five Transfer Development Rights (TDR's) are required for each of the 183 units above the new base density of 69 units, for a total of 915 TDR's.
 - * In reviewing the site plan files for Mill Creek Condominiums and The Harbour at Solomons (SPR 97-24 and SPR 02-36), it appears that ½ of the right-of-way for Dowell Road fronting these developments (a 1.069 acre widening strip) was included in the density calculations for the condo units. This portion of the right-of-way has also been included on the subject preliminary plan (for dedication purposes) and appears to have counted in the overall acreage. In addition, staff would like verification that the 1.0± acre recreation area parcel that was conveyed to Windward Harbor was not included in the overall acreage. Staff recommends that any areas within the residential portion of the site that are required to satisfy the parking requirements for the commercial marina of existing businesses be subtracted from the residential acreage and that the applicant's engineer provide revised acreage and density figures prior to final plat submittal. Staff considers these adjustments to the plan minor in nature, as they are not expected to result in changes to the layout of number of lots proposed herein.
- 3. Within the Solomon's Town Center, the density may be increased up to no more than seven units per acre with the use of five Transfer Development Rights (TDR's) for each lot above the permitted conventional density of 69 units.

The applicant has chosen to designate the development as an "age-restricted"

community. Per Section VII.D.2.b of the Solomons Zoning Ordinance, "The use of Transfer Development Rights (TDR's) shall not be required for elderly (age-restricted) housing developments limited to individuals fifty-five (55) years of age or older. As part of the final plat approval, however, a declaration of covenants shall be submitted for recordation among the land records of Calvert County. The covenants shall be referenced on the final plats and all subsequent development plans. The Declaration of Covenants shall specify to the property owners and residents of the subdivision, the restrictions for elderly housing and the requirements that shall apply, if the project is converted to general housing in the future.

4. The final plat shall include the required setbacks as set forth in accordance with the Chapter VII.D.2.c-e (and Table 2) of the Solomons Zoning Ordinance. The Ordinance permits developments in the E-1 and E-3 Sub-districts to reduce the minimum lot width below 75' (no further minimum is cited) provided that certain parking requirements are met. The height of all structures shall adhere to Chapter VII.D.4 of the Solomons Zoning Ordinance. The height restrictions shall be noted on the final plat.

The applicants are proposing to reduce minimum lot widths within the subdivision below the 75' and therefore, must meet the parking criteria set forth by the provision; specifically, two off street parking places shall be provided for each dwelling per unit and 15% of the total number of parking spaces provided for the lots shall be provided for guest and overflow parking. Such parking can either be provided as on-street parking or as separate parking areas within easy walking distance of the majority of dwelling units within the development. These conditions shall be addressed as part of Condition 5, Section II (below).

- 5. Parking for this development shall comply with the requirements of Chapter VII.D.2.D.6 and D.7 (as applicable) of the Solomons Zoning Ordinance and Article 6-2 of the Calvert County Zoning Ordinance. This shall include all proposed development and the existing development to remain on the site (including the residue parcel). The parking counts and parking plan shall be revised as necessary prior to final plat submittal. The required parking for the proposed and existing facilities shall be shown and noted on the final plats.
- 6. Per Article 7-1.05.D.4 of the Calvert County Zoning Ordinance, the age-restricted subdivisions are exempt from meeting the requirements Adequate Public Facilities Ordinance (APFO) for school adequacy (capacity). The subdivision must still meet the APFO requirements for roads prior to final plat approval. A note to this effect shall be included on the final plat.
- 7. As the proposal is for a single family-detached subdivision there is no separate Site Plan approval required. However, per Article 7-1.09 of the Calvert County Zoning Ordinance, the applicant shall submit an Improvement Plan and bond estimate to address any required site amenities including, but not necessarily limited to, the sidewalks, bike paths, pathways, street trees, street lighting, recreational facilities (including the community center), as well as all required landscaping. The Improvement Plan and bond estimate shall be submitted to the Dept. of Planning and Zoning for review and approval prior to

final plat approval. Bonding for the required amenities shall be posted with the Public Works Agreement. A note referencing the Improvement Plan and bonding shall be included on the final plat.

- 8. The developer shall be responsible for construction of all the required amenities and a homeowners/property owners association shall be responsible for the maintenance of the amenities. Per Article 7-1.06.S.4 of the Calvert County Zoning Ordinance, when areas are reserved for common use by all property owners in the subdivision, a trust agreement (i.e. covenants) shall be made a part of the deed restriction and shall provide for the development and perpetual supervision and maintenance of the common areas and improvements. Prior to final plat approval, the applicant shall also provide documentation that such covenants have been executed. Per previous Planning Commission policy, a statement must also be provided on the final plat and signed by the applicant stipulating that prior to settlement, all purchasers of lots are to be fully informed of the existence of covenants, the extent of the common areas and facilities and the responsibilities of each homeowner to participate in the costs and maintenance of the common areas and facilities.
- 9. The following names have been approved by Planning & Zoning and shall be shown on the final plats; for the public right-of-way, Admiral Hewitt Drive, Creek View Drive, Ensign Road, Fairwinds Road, Gerald Way, Hazelton Road, Mainsail Way, Reveille Road, Riverwatch Drive, Victory Lane, and Whitecap Road (note: Dowell Road, Belle Field Road and Foxhall Road will be used as they are extensions of existing roads). For the Alleyways: Aweigh Place, Boom Place, Bosun Place, Drouge Place, Cringle Place, Gull Place, Marlin Place, Mooring Place, Tiller Place, Sail Place, Skipper Place, Sloop Place, and Shipyard Place.
- 10. House numbers are to be shall be assigned off of the public right-of-ways only and shall in no case be assigned off of an alleyway. This shall be noted on the final plat. The assigned house numbers shall be shown on the final plat. The assigned house numbers will be provided at time of final plat review.
- 11. All site development within this subdivision (including signage and the renovation of the existing house into a clubhouse) is subject to Architectural Review in accordance with P.F.Z.O, Chapter Section VII. A note to this effect shall be included on the final plat.

Environmental - Wetlands, Floodplain, Conservation Areas and Associated Buffers

- 12. Indicate on the final plat the 100-year floodplain areas that exist on-site. A minimum 10' setback must also be provided adjacent to all 100-year floodplain areas. Label all 100-year floodplain areas and required setbacks on the final plat and place a note on the plat stating that no residential construction will be permitted within the 100-year floodplain.
- 13. A Jurisdictional Determination of Wetlands (JD) was approved by the Army Corp. of Engineers and accepted by the Environmental Planner. A Wetland Evaluation Report prepared By McCarthy & Associates, Inc. in March 2001 was also submitted and accepted by the Environmental Planner. All tidal and non-tidal wetlands must be

delineated on the final plat. A minimum 50' undisturbed natural vegetation buffer shall be maintained from the boundaries of the non-tidal wetland landward. Per Article 8, of the County Zoning Ordinance, label the wetlands and 50' wetland buffer on the final plat and place a note on the plat indicating that, "the non-tidal wetlands and associated buffer areas are to be left undisturbed in perpetuity and are to serve for water quality benefits." The amount of non-tidal wetlands (in acres) shall be included on the final plat.

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- 14. Show not only the lateral lines but also the required setback for the lateral lines on the final plat.
- 15. Development within the Critical Area, IDA requires that there be a 10% reduction in pollutants. The calculations have been provided and must be carried out through the road construction and stormwater management plans. A note shall be added to all subsequent plans and plats.
- 16. Per the Solomons Master Plan and Zoning Ordinance (Chapter VIII.a), the 30' buffer area (within the E-1 Sub-district) and the 100' buffer/ extended buffer (within the E-3 Sub-district) shall be clearly delineated on all subsequent plats and plans. The 100' buffer area shall be designated as a non-disturbance area except to the minimum extent necessary for the provision of a pervious pathway. The following conditions apply to the 30' buffer area (within Sub-district E-1), no parking is permitted within the buffer/setback, all structures are to be of pervious surface materials, no decks may be higher than 5' above ground level and only water dependant facilities are permitted (per COMAR definitions). A note to this effect shall be included on in the covenants deeds, plats and plans.

There are existing improvements that encroach into the 30' buffer, primarily on the residue. Where feasible, the improvements must be relocated outside of the buffer areas. Any remaining or proposed encroachment must meet the Critical Area regulations and Solomon Town Center Zoning Ordinance requirements.

17. Native vegetation shall be established in the required Critical Area Buffers. Wherever practical, permeable areas (outside the buffers) shall also be established in native vegetation and redevelopment shall reduce existing levels of pollutions. Street trees and park plantings would in part be an acceptable method of fulfilling this requirement. This shall be addressed on the Improvement Plan.

This requirement is also consistent with the Solomons Master Plan (Chapter III.5, page 52) that states that the impacts of noise and lighting from waterfront development can be significantly reduced, if not altogether eliminated, by requiring adequate landscape buffering along the waterfront in new developments.

- 18. Where walkways and other development impact wetlands or wetland buffers, State and/or Federal permits may be required. A note to this effect shall be included on all subsequent plats and plans.
- 19. All walkways and paths in or adjacent to the required buffers shall be designed using

pervious surface material. Construction of the walkways shall be done in such a manner as to minimize disturbance within the buffers.

20. Critical Area Commission

21. All of the comments in the Critical Area Commission letter dated March 21, 2006 must be resolved or met prior to final plat approval (attached).

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Historic District Commission

- 22. The applicant/land owner shall arrange for the HDC or its designee, to conduct an Archeological Assessment of the site prior to the issuance of any demolition, grading and or building permits. A note to this effect shall be included on the final plats.
- 23. Per the HDC memos of April 28, 2006 and May 5, 2006, the property was once site of a Navel Amphibious Training Base (ATB). Several buildings associated with the ATB have been included on the Maryland Inventory of Historic Properties (CT-800) Based the general policies set forth in the Solomons Master Plan (Chapter II.C.9, pg 44) and the HDC comments, staff recommends that those structures identified by the HDC (and any other historically significant structures subsequently found by the Archaeological Assessment), be preserved on-site and integrated into the proposed development. If this is not possible, staff recommends that the structures be made available to the HDC for relocation. The HDC also recommends that the applicant consider the benefits of placing (at a minimum) the Officer's Quarters into a Historic District.
- Other archaeological sites have been located in the vicinity of this project. Consequently, it is possible that archaeological remains will be encountered during site preparation. The developer/contractor shall notify the HDC if, during construction, any archaeological artifacts are discovered on-site. A note reflecting this condition shall be added to the final plat.

<u>Public Works and State Highway Administration</u> - Road Standards and Stormwater Management <u>DPW</u>, <u>Engineering Bureau</u>

- 25. The applicant's surveyor shall certify on the plat that the locations of all subdivision street intersections and entrances meet or exceed AASHTO sight distance criteria for the posted speed of the road. An easement shall be provided on the final plat to accommodate the sight distance triangles.
- 26. The applicant's surveyor shall certify on the plat that an entrance location exists along the lot, be it on a public road or alley that meets or exceeds the sight distance requirements of the Calvert County Road Ordinance.
- 27. A shared driveway shall serve Lots 249 & 250. An easement shall be shown on the final plat to facilitate this. A deed of easement shall be submitted for recordation with final plats.
- 28. All subdivision street curves shall be designed to meet the minimum standards as set forth in the Calvert County Road Ordinance. Show horizontal curve data on the final plat.

- 29. All lots shall be restricted to interior road access.
- 30. All driveways shall be a minimum of 60' from intersection fillets.
- 31. The subdivision streets shall be designed to meet the roadway standards of the current Calvert County Road Ordinance in effect at the time of road plan review.
- 32. Note on the plats that the proposed alleys shall be private, non-County owned and maintained and shall not be petitionable in perpetuity to the County for county ownership or for County maintenance. The developer shall be responsible for providing for the construction and the lot owners shall be responsible for maintenance including snow removal and repairs as well as other improvements and road service normally provided by the County.
- 33. A widening strip of sufficient width to provide for an ultimate 60' right-of-way along Dowell Road shall be dedicated to the County. The deeds for the widening strips shall be submitted for recordation with the recording package.
- 34. Landscaped islands within County rights-of-way must be deeded to the homeowner's association; the County will not be responsible for their maintenance. This Department must approve plantings within the islands in order to insure adequate sight distance is maintained.
- 35. The road around the divided portion of relocated Dowell Road shall have 18' wide lanes and be signed one-way.
- 36. Mainsail Way and Gerald Way may be reduced to a 30' public rights-of-ways provided that they are designated as "one-way" streets.
- 37. Final road plan approval from the Dept. of Public Works is required prior to final plat recordation.
- 38. Previous Transportation comments #4 & #5 from the memo dated March 3, 2006 no longer apply, per the revisions made to the preliminary plan as requested by this Department.
- 39. Dowell Road improvements to be done as part of this subdivision shall include the following:
 - The design and construction of Dowell Road from the southern property line of the pump station lot on the west side of Dowell Road to its terminus on the Harbours at Solomons (HAS) project.
 - Dowell Road Design Speed is to be 40 miles per hour (mph). Posted Speed is to be 30 mph.
 - The pavement structure as provided by URS shall be used for the HAS section of Dowell Road.
 - Curb and gutter for Dowell Road is to be 8" "A". All other streets in the HAS development can be 6" curb and gutter.
 - All Right-of-Way negotiations and acquisitions along both the County and the HAS
 sections of Dowell Road are to be provided by Calvert County. Plats in both the
 County and the HAS sections are to be provided by URS.
 - The HAS section of Dowell Road is to be a 36' section from Face of Curb (FOC) to face of Curb (18'southbound lane, 18' northbound lane, both lanes striped for 15'

lanes and a 3' space to FOC). The county section of Dowell Road is to be a 40' section FOC to FOC (15' southbound lane, 10' center turning lane, 15' northbound lane). A transition from the 40' three lane County Section to the 36' 2 lane HAS section is to occur in +/- 220' from the southern property line of the pump station on the west side of Dowell Road to the first side street to the west in the HAS development. This transition is to be with a thermo plastic pavement marking or other lane direction device.

- Sidewalk along the HAS section of Dowell Road is to have an 8' bike/sidewalk abutting the curb on both sides of Dowell road to allow a loop for the bike path with out having to cross Dowell Road.
- URS is to provide HAS with the drainage areas for the County Section of Dowell Road draining to the HAS section of Dowell Road. HAS is to investigate the possibility of managing the runoff in the HAS development Stormwater Management (SWM) structure.
- Show all storm drainage easements and points of discharge on the final plat. Note on the plat that no permanent structures are allowed within the storm drain easements.
- 40. Show all storm drainage easements and points of discharge on the final plat. Note on the final plat that no permanent structures are allowed within the stormdrain easements.
- 41. The stormwater management (SWM) study submitted is approved in concept. In accordance with Section 4.1(a) of the SWM Ordinance, the final design of the SWM facilities must be submitted prior to final approval of the subdivision in order that easements necessary for SWM may be shown on the plat.
- 42. In addition to the road improvements required by the County, a mitigation plan for road improvements in the area of Dowell Road, MD Rt. 765 and MD Rt. 2/4 shall be reviewed and accepted by SHA prior to final plat approval.

Water & Sewer

43. Construction plans to finalize the required design of water and sewerage infrastructure must be submitted prior to final approval of the subdivision in order that easements and pump station parcels necessary for community sewer and water may be shown on the plat. It appears that a minimum of two pumping stations will be necessary to accommodate this subdivision. The conveyance of such parcels shall be specified in the Public Works Agreement for the Water and Sewer.

CRITICAL AREA COMMISSION 1804 West Street Suite 100 Annapolis, Md. 21401

NOTIFICATION OF PROJECT APPLICATION

Jurisdiction: Calvert County Pate:					
Name of Project (site name, subdivision name, or other): Date: White Market Market					
Local Case Number: 194 Project location/Address: 14415 Novell Rd Solomons 20488					
Project location/Address: 14415 Novel Kal Soloynom 20688					
Tax Map 44 Block 16 Lot Parcel 294					
Type of Application Type of Project: Current Use:					
(Select all applicable) (Select all applicable) (Select all applicable)					
Residential Commercial Commercial Commercial Agriculture Facility/Pier/Marina Intrafamily Growth Allocation Others Oth					
SITE INVENTORY OF AREA ONLY IN THE CRITICAL AREA					
TOTAL ACRES IN CRITICAL AREA:					
Chartelland					
TOTAL IMPERVIOUS SURFACE: REMOVED MPER VIOUS SURFACE Bays GROWTH ALLOCATION DEDUCTED:					
RCA TO LDA: RCA TO IDA: LDA TO IDA					
ROTTO DA. LDA TO IDA					
Local Jurisdiction Contact Person: _Aimee Dailey					

To clear? 25 acres

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APPLICATION FOR GRADING PERMIT

Calvert County, Inspections and Permits Division 150 Main Street, Suite 200 Prince Frederick, Maryland 20678 (410)535-2155, (410)535-2156



ROYCH 114	7
Building A/P # Received by: Date: 5 3 0 Office Use Only	

Tax ID # 01-012185
TM 44 Grid 16 Parcel 294
Blk Lot Sect

10)535-2155, (410)	Blk Lot Sect
Property Owner Information	Name CALUENT MANUM LLC Daytime Phone 96 COA 410 - 535 - 3101 Current Mailing Address P.O. Box 157 City, State, & Zip Solomows M.D. 20688
Ĵob .	Town or Subdivision Name of Main Road Dowell Romo Address 14415 Down Road City & Zip Down MD 20629
Location Information	Deed Reference Kps 1147/580 Acreage 92.4 t Lot(s)
	Porto, left 60 TO Ears of Davell RD SIRS ON RIGHT
Contractor Information	Company Name License Number City, State, & Zip
mormation	Name of Superintendent/Contractor Phone Number
The Property is loc	cated in: a Town Center the Critical Area the Flood Plain Board Of Appeals Case #
	ork: CLERRING DEMOCITION, Sediment & estosion Control
	\$ STABILIZATION
License I hereby certify to the an anti-certify in the anti-certific in the	that: uthority to make this application and the information given is correct; n and installation of erosion and sediment control measures shall be in accordance with the Erosion and Sediment linance of Calvert County; and lest the Calvert County Project Management Division to approve work completed in accordance with the approved defension control plan for this site. Approval is required upon completion of installation of perimeter sediment and trols and upon final stabilization of all sites with disturbed areas before removal of controls. HENCOA 410-535-3101 HENCOA COA UNE Agent KETTHE. UTTLEY
Date	Phone number Signature of Owner or Authorized Agent Please Print Name
Reviewed for Ca	alvert S.C.D. and meets Technical Requirements FOR OFFICE USE ONLY
Date	Representative, USDA - NRCS
specifications of	that the plan of development and the plan for control of erosion and sediment meet the requirements, standards, and the Calvert Soil Conservation District, as set forth in the Statewide Sediment Control Law, Natural Resources Article through 8-1106 of the Annotated Code of Maryland.
Date	Representative, Calvert Soil Conservation District
Approval of this	application is hereby granted for the issuance of a grading permit subject to all applicable State and County laws.
Date	Division Chief, Project Management & Inspections
Desir	
Fees \$	Planning and Zoning PWA Approved:

PWA \$
Base \$

Surface \$

DPW Approved:

SWM \$

Other \$

Other \$



CALVERT COUNTY DEPARTMENT OF PLANNING & ZONING

150 Main Street
Prince Frederick, Maryland 20678
Phone: (410) 535-2348 • (301) 855-1243

Director
Gregory A. Bowen

May 26, 2006

Board of Commissioners Gerald W. Clark David F. Hale Linda L. Kelley Wilson H. Parran Susan Shaw

Critical Area Commission Attn: Ms. Kerrie Gallo 1804 West Street, Suite 100 Annapolis, MD 21401

Subject: Harbours at Solomons

Dear Kerrie,

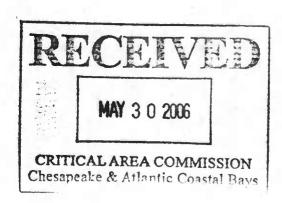
Enclosed is the Staff Report for Harbours at Solomons that you requested from Olivia on 18 May 2006.

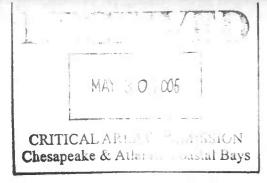
If you need additional information, please do not hesitate contacting us.

Sincerely,

Becky Parkinson Office Assistant II

enc





Planning Commission Presentation 05-17-06

SD 02-08A, Harbours at Solomons

The site is located at the end of Dowell Road in Dowell. Oyster Bay Condominiums is located to the north of the site. Windward Harbour Condominiums and Mill Creek Condominiums, both of which were derived from the original parent tract, are located on the east side of Dowell Road across from the property. The site now consists of a 97.743± acre residue parcel (Parcel 294). The parcel is located within the Sub-districts, E-1 and E-3 of the Solomons Town Center. The site is also located within the Critical Area's Intense Development Area (IDA). The application was accepted as adequate for distribution on February 14, 2006 and is therefore, subject to the Zoning Ordinances in effect prior to the May 1, 2006 amendments.

The property is located on a peninsula that is surrounded by Back Creek and Mill Creek. The site is currently developed with numerous structures including approximately 337 commercial piers. Some of the existing buildings support marina related businesses including the Southern Maryland Sailing Association, Washburn's Boatyard, and Custom Marine Fabrications. There is also full service restaurant and carryout located on-site as well as the Dowell Post Office. The property also contains a number of buildings/structures that were constructed as part of the U.S. Navy Amphibious Training Base (ATB), which operated from 1942 – 1945 (see HDC comments attached). Some of these structures have been listed on the Maryland Inventory of Historic Properties under CT-800. The applicant is proposing adaptive reuse of one of the structures, the Senior Officer's Quarters, which will be renovated and incorporated into a proposed community center. The HDC applauds this decision and suggests that the applicant consider the benefits of designating the Officer's Quarters as a Historic District. In addition, there are other structures identified by the HDC that are worthy of preservation. Accordingly, the HDC requests that if these buildings cannot be integrated into the project, that they be offered for relocation.

Within the Town Center, non-tidal wetlands are not required to be deducted prior to calculating density. The subdivision application is for 252 single-family detached lots on 69.491± acres, leaving a 28.252 acres residue. The residue will continue to support most of the existing commercial businesses located on the site. Consequently, the residential density can only be calculated on the 69.491 acres. Within the Solomons Town Center, the residential density may be increased to no more than seven units per acre via Transfer Zone. There is no density limit applied within the Critical Area, IDA. With 252 lots, the proposed density equates to 3.63 units per acre. The maximum conventional density in the Solomons Town Center is one unit per acre. The density may be increased to no more than seven units per acre via Transfer Zone and the use of five Transfer Development Rights (TDR's) for each of the 183 units above the conventional density (69 units), for a total of 915 TDR's. The applicant however, is choosing to designate the development as an "age—restricted" community; therefore, no TDR's shall be required.

The Solomons Zoning Ordinance does not set specific requirements for open space and recreation. Consequently, these requirements are taken from Article 7-1.06.S.3 of the Calvert County Zoning Ordinance. Per the Ordinance, 650 sq. ft. of neighborhood recreation must be

provided per unit of which 200 sq. ft. (of 1.157 acres) must be developed with specific recreational facilities. With 252 units, 163,800 sq. ft. (or 3.78 acres) of land suitable for neighborhood recreation must be provided with 50,400 sq. ft. (or 1.16 acres) developed with active recreational facilities. Based upon the criteria set forth in the Ordinance, three open play fields (or village greens) and 5, 292 sq. ft. of paved area facilities (i.e. shuffle board, hand ball, or other formal net games, etc.) must be provided. The applicant is proposing to substitute the standard recreational facilities for ones that better suit the needs of residents 55 years or older. Four mini-parks totaling 45,149 sq. ft. (or 1.036 acres) have been provided throughout the community. In addition, a 7.988 acre parcel will be provided near the southern tip of the property for a large community recreational center. The Senior Officer's Quarters will be renovated and enlarged for use as a community center. There is an existing swimming pool onsite that is currently used by the Southern Maryland Sailing Association and the residents of Windward Harbour. This pool will be relocated adjacent to the community center. A fitness center will also be incorporated into the community center. Originally, it appears that a portion of the recreation area and improvements required for Mill Creek Condo development was located on the subject property. To resolve this conflict, the owner/applicant has conveyed a 1.0+ acre recreation area parcel (located on the south side of the lake) to the Mill Creek Council of Unit Owners. In addition, the applicant has extended an offer to the both Windward Harbor and Mill Creek homeowners associations to participate in the use of the community center and pool complex. The mini-parks and the 7.988 acre community center parcel will be conveyed to a Homeowner's Association.

As proposed, the subdivision layout does not provide the residents with any common area water frontage. The site's waterfront has been included within the residue parcel to be retained by the current landowner for possible future marina related development. The landowner has agreed to the provision of a pervious surfaced pathway to be constructed along the length of the waterfront that may be used by the residents. This pathway will run from the commercial marina on Back Creek to the Community Center and to Mainsail Way adjacent to Mill Creek. Portions of this pathway will be placed primarily within the Critical Area buffer. Sidewalks will also be provided along both sides of the public streets. Furthermore, the sidewalks will be widened to 8' along the west side of Dowell Road and the interior loop road, to serve as a bike lane.

Vehicular access to approximately 194 of the lots will be via 20' wide alleyways. These alleyways will range in length from 150' linear feet (serving 3 lots) to approximately 635' (serving 22 lots). The Calvert County Zoning Ordinance defines an alley as, "A public or private right-of-way that connects two or more streets and is intended to provide access to the rear or side of a building or lot. It is intended for local traffic only." Otherwise, neither the Solomons Zoning Ordinance nor the Calvert County Zoning Ordinance addresses the use alleyways within residential subdivisions. All lots with access to an alleyway will have rear-loaded garages. It should be noted that the alleyways have not been designed as separate right-of-ways parcels but instead, will be located over the common rear lot lines and situated within the rear setbacks of the lots. The alleyways will be managed and maintained by a Homeowners Association. The remainder of the lots (58) will have access from a public right-of-way with front load garages. Two of the public right-of-ways (Gerald Way and Mainsail Way) have been reduced to 30' in width, which is permitted under Article 7-1.06.D.8 of the Calvert County Zoning Ordinance. The reduction has also been, approved by the Dept. of Public Works with the condition that the streets be restricted to "one-way" movement.

Two exterior parking places must be provided on each lot and 15% overflow parking must also be provided within an easy walking distance of the majority of the units. The required overflow parking will be met primarily with parallel parking incorporated into the public right-of-way. In addition to the residential parking requirements, the applicant was required to document that there was adequate parking to serve the existing facilities, including 437 commercial boat slips (at a rate on one parking space per two slips, plus 15% overflow parking), two restaurants (at a rate of one parking space per 50 sq. ft. of floor area) and the proposed community center. A parking plan was submitted which indicated that based upon the requirements, 936 spaces will be required and 1,204 parking spaces will be provided. However, it should be noted that a portion of the parking spaces required for the commercial slips are located on the residue, adjacent to the commercial buildings that support the marina related businesses. Parking counts were not provided for these building/businesses so, the parking plan may have to be revised as part of the required Improvement Plan and additional parking spaces provided on the residue to accommodate these buildings/businesses.

There are two waterfront parcels (Parcels 531 and 548, currently under one ownership) located north of the commercial portion of the residue, which have limited access via an easement through the Oyster Bay Condo development. The contract purchaser of the parcels has requested additional access be provided through this subdivision proposal. The applicants have provided a 50'wide future right-of-way to the parcels. The use of this right-of-way, however, will have to be negotiated by the owner of the adjacent parcels.

Comments from the Utilities Bureau indicate that the subdivision is located within the existing boundaries of the Solomons Sanitary District Service Area and will be served by an existing water and sewer system. The project is in conformance with the current Calvert County Comprehensive Water and Sewer Plans for Water Planning Category W-1 and Sewerage Planning Category S-1 (Existing and/or Under Construction). Furthermore, the Solomons Sanitary District water supply and sewerage systems have adequate capacity to serve this proposed project, taking into account all existing and all approved proposed developments within in this service area. Upgrades and extensions of the systems including the addition of at least two pumping stations may be required. Construction plans for the extensions/upgrades of the water and sewer systems to serve this site must be approved prior to final plat approval.

As part of the subdivision approval, road improvements in the area of Dowell Road and MD Rt. 275 are anticipated through the State Highway Administration (SHA). The applicants have met with SHA to development a mitigation plan but SHA has not completed their traffic analysis. As with the water and sewer plans, staff is recommending that the road mitigation plan be approved prior to final plat approval.

With regard to the environmental aspects of the plan, the Critical Area Commission (CAC) has questioned whether subdivisions within the Buffer Exempt Area of the IDA is permissible under the County's Zoning Ordinances. It is their position that the 100' buffer should be maintained until such time that criteria for subdivisions within these areas have been approved by the CAC and adopted by the County. There is no wording within the applicable Zoning Ordinances that prohibits subdivision within the IDA buffer exempt area. Consequently, it is staff's position that although there is no specific criteria, there is an acknowledged 30' buffer required within the

6

Buffer Exempt Area as set forth in the Solomons Master Plan and Zoning Ordinance to which the application must adhere.

The following agencies have submitted comments:

Engineering memo dated:

05-02-06

Transportation memo dated:

03-03-06 & 05-01-06

Environmental memo dated:

05-03-06, 05-08-06 & 05-11-06

Critical Area Com. memo dated:

03-21-06

MD Dept. Natural Res. memos dated:

03-16-06

MD Dept. of Environment memo dated:

003-16-06

SHA memo dated:

05-04-06

Historic District Com. memos dated:

04-28-06 & 05-05-06

Water and Sewer memo dated:

05-08-06

Army Corp of Engineers (JD):

08-22-01

The Department of Planning and Zoning has reviewed the proposed subdivision, SD02-08A, The Harbour at Solomons, 252 single-family detached lots and the review agency comments and recommends preliminary approval, subject to the following conditions:

Section I - Subdivision Layout and Design

- 1. Site development shall comply with all of the policies and requirements of the Solomon's Town Center Master Plan and Zoning Ordinance, and the Calvert County Zoning Ordinance in effect prior to the May 1, 2006 amendments.
- 2. The application shall be subject to meeting all of the requirements of the Critical Areas, IDA zone. This shall be noted on all subsequent plans and permits.
- 3. Per Article 5-2.02.C.3.c of the Calvert County Zoning Ordinance, each lot shall have a 25' minimum of frontage along a public right-of-way, except for two adjacent flag lots where the frontage for each lot may be reduced to 12.5' with the provision of a shared driveway and required easements.
- 4. Per Article 7 of the Calvert County Zoning Ordinance, the Planning Commission may

require sidewalks. The Solomons Master Plan also specifies the provision of sidewalks in developments containing over 10 lots, in order to maintain and enhance the sense of community. The Master Plan also specifies, "sidewalks are deemed necessary and all pedestrian circulation and automobile traffic should be separated and clearly defined". Therefore, staff recommends that sidewalks (min. 5' in width) be provided on both sides of all public rights of ways. Furthermore, the sidewalk shall be a minimum 8' in width along the west side of Dowell Road and along the primarily internal loop road to serve as a bike lane. Easements shall be provided on the final plats for the installation and maintenance of the sidewalks that are located outside the public rights-of-way. A note shall be added to the final plat indicating that the sidewalks shall be constructed by the developer and maintained by the individual property owner or the homeowner's association. A deed for the easement shall be submitted with the recording package.

- 5. Per the Solomons Master Plan and Zoning Ordinance (V-9) a bike path is required along the western side of Dowell Road. A minimum 8'wide bike path/lane shall be provided along Dowell Road and the primarily internal loop road (Creek View Dr., Riverwatch Dr. south of Dowell Rd. and Adm. Hewitt Drive, between Creek View Dr. and Riverwatch Dr.). The design of the bike path shall be included in both the road construction plans and Improvement Plans.
- 6. The Solomons Zoning Ordinance does not set specific requirements for open space and recreation. Consequently, these requirements are taken from Article 7-1.06.S.3 of the Calvert County Zoning Ordinance. A minimum 650 sq. ft. of neighborhood recreation must be provided per unit, of which 200 sq. ft. must be developed with specific recreational facilities. With 252 units, 163,800 sq. ft. (or 3.78 acres) of land suitable for neighborhood recreational must be provided with 50,400 sq. ft. (or 1.16 acres) developed with active recreational facilities.

The minimum recreational facilities to be provided are as follows:

Playing Fields/Village Greens:

150 sq. ft. per unit; min. size per field: 10,000 sq. ft., Dimensions: 100' X 100'.

252 (units) X 150 = 37,800 sq. ft. = 3.78 fields, which equates to 3 fields with 7,800 sq. ft. remaining to be applied to satisfy other rec. facilities.

Paved Area:

21 sq. ft. per unit

Dimensions: Min. ½ court: 50' X 42' (2,100 sq. ft) or whole court: 50' X 84 (4,200 sq. ft.) (i. e. basketball, shuffleboard, handball, or other formal net games, etc.)

252 (units) X 21 = 5,292 sq. ft. = two $\frac{1}{2}$ courts or one full court, with 1,092 sq. ft. remaining for other rec. facilities.

The Planning Commission may approve variations in size and dimensions of the required recreational facilities.

Other Recreation:

Facilities from remaining acreage (i.e. fishing piers, fitness trails outdoor theaters, etc.) 7,800 sq. ft. (open play) + 1,092 sq. ft. (paved area) = 8,892 sq. ft. of additional rec. area required

Proposed:

Playing Fields/Village Greens:

Four mini-parks (two under the 10,000 sq. ft. minimum) totaling 45,149 sq. ft. (or 1.036 acres), to be located throughout the community. In addition, a 7.988 acre parcel will be provided near to the southern tip of the property for a community recreational center.

Paved Area:

To be determined with Improvement Plan.

Other Recreation: (7,800 sq. ft).

Community Center with pool and fitness center (on the 7.988 acre parcel). The Senior Officer's Quarters will be renovated and enlarged for use as the Community Center. Actual size (sq. ft.) of community center and pool complex not yet determined. Provision of a pathway along the waterfront from the restaurant on Back Creek to the Mainsail Way on Mill Creek.

Staff has reviewed the proposed neighborhood recreation. With the exception of meeting the paved areas requirement, this proposal appears to be consistent with the intent of the Ordinance. The amount of land provided for recreation far exceeds the required acreage. With regard to the proposed recreational facilities, staff recommends that the remaining recreational facilities requirements be worked out as part of the required Improvement Plan to ensure that the facilities are appropriate for the age group of the residents. Staff also recommends that in accordance with the Environmental recommendations for planting within the pervious areas of the site, that the neighborhood recreation areas, including the 7.8 community center parcel, be landscaped as part of the Improvement Plan.

7. Per Article 7-1.06.D.6 of the Calvert County Zoning Ordinance, if a portion of a tract or an adjacent parcel is not subdivided, suitable access to street openings for eventual extension of the streets shall be provided.

There are two waterfront parcels, Parcels 531 and 548 (currently under one ownership) situated between the commercial residue and Oyster Bay Condominiums that have limited access via an easement through the Oyster Bay development. In accordance with the above provision, the contract purchaser of the parcels has requested additional access be provided through this subdivision proposal. The applicant has set aside a 50'wide future right-of-way, between Lots 18 and 19 (off of Creek View Drive) for access to the parcels. The 50' wide future right-of-way to Parcels 531 and 548 shall be shown and noted on the final plat.

- 8. The alleyways, as shown on the preliminary plan, shall maintain a minimum width of 20' (10' on each side of the common property line of the residential lots). The alleyways shall be constructed by the developer to standards set forth by DPW. The alleyways shall be managed and maintained by a Homeowners Association. Access easements for the alleyways shall be shown and noted on the final plats. A deed of easement shall be provided for recordation with the final plats.
- 9. Article 7-1.06.D.8 of the Calvert County Zoning Ordinance, two of the public rights-of-ways (Gerald Way and Mainsail Way) may be reduced to 30' in width provided that the streets be restricted to "one-way" movement and indicated as such on the final plats.

Section II- Minimum Requirements and Standards

Planning and Zoning - Subdivision Regulations and Zoning Ordinance

- 1. Provide signed certificates by the Health Officer, surveyor and owner on the final plat.
- 2. The subdivision application is for 252 single-family detached lots on approximately 69.491 acres, leaving a 28.252 acres residue. The residue will continue to support most of the existing commercial businesses located on the site. Consequently, the residential density can only be calculated on the 69.491 acres*. Within the Solomons Town Center, the residential density may be increased to no more than seven units per acre via Transfer Zone. There is no density limit applied within the IDA. With 252 lots, the proposed density equates to 3.63 units per acres. Five Transfer Development Rights (TDR's) are required for each of the 183 units above the new base density of 69 units, for a total of 915 TDR's.
 - * In reviewing the site plan files for Mill Creek Condominiums and The Harbour at Solomons (SPR 97-24 and SPR 02-36), it appears that ½ of the right-of-way for Dowell Road fronting these developments (a 1.069 acre widening strip) was included in the density calculations for the condo units. This portion of the right-of-way has also been included on the subject preliminary plan (for dedication purposes) and appears to have counted in the overall acreage. In addition, staff would like verification that the 1.0± acre recreation area parcel that was conveyed to Windward Harbor was not included in the overall acreage. Staff recommends that any areas within the residential portion of the site that are required to satisfy the parking requirements for the commercial marina of existing businesses be subtracted from the residential acreage and that the applicant's engineer provide revised acreage and density figures prior to final plat submittal. Staff considers these adjustments to the plan minor in nature, as they are not expected to result in changes to the layout of number of lots proposed herein.
- 3. Within the Solomon's Town Center, the density may be increased up to no more than seven units per acre with the use of five Transfer Development Rights (TDR's) for each lot above the permitted conventional density of 69 units.

The applicant has chosen to designate the development as an "age-restricted"

community. Per Section VII.D.2.b of the Solomons Zoning Ordinance, "The use of Transfer Development Rights (TDR's) shall not be required for elderly (age-restricted) housing developments limited to individuals fifty-five (55) years of age or older. As part of the final plat approval, however, a declaration of covenants shall be submitted for recordation among the land records of Calvert County. The covenants shall be referenced on the final plats and all subsequent development plans. The Declaration of Covenants shall specify to the property owners and residents of the subdivision, the restrictions for elderly housing and the requirements that shall apply, if the project is converted to general housing in the future.

4. The final plat shall include the required setbacks as set forth in accordance with the Chapter VII.D.2.c-e (and Table 2) of the Solomons Zoning Ordinance. The Ordinance permits developments in the E-1 and E-3 Sub-districts to reduce the minimum lot width below 75' (no further minimum is cited) provided that certain parking requirements are met. The height of all structures shall adhere to Chapter VII.D.4 of the Solomons Zoning Ordinance. The height restrictions shall be noted on the final plat.

The applicants are proposing to reduce minimum lot widths within the subdivision below the 75' and therefore, must meet the parking criteria set forth by the provision; specifically, two off street parking places shall be provided for each dwelling per unit and 15% of the total number of parking spaces provided for the lots shall be provided for guest and overflow parking. Such parking can either be provided as on-street parking or as separate parking areas within easy walking distance of the majority of dwelling units within the development. These conditions shall be addressed as part of Condition 5, Section II (below).

- 5. Parking for this development shall comply with the requirements of Chapter VII.D.2.D.6 and D.7 (as applicable) of the Solomons Zoning Ordinance and Article 6-2 of the Calvert County Zoning Ordinance. This shall include all proposed development and the existing development to remain on the site (including the residue parcel). The parking counts and parking plan shall be revised as necessary prior to final plat submittal. The required parking for the proposed and existing facilities shall be shown and noted on the final plats.
- 6. Per Article 7-1.05.D.4 of the Calvert County Zoning Ordinance, the age-restricted subdivisions are exempt from meeting the requirements Adequate Public Facilities Ordinance (APFO) for school adequacy (capacity). The subdivision must still meet the APFO requirements for roads prior to final plat approval. A note to this effect shall be included on the final plat.
- 7. As the proposal is for a single family-detached subdivision there is no separate Site Plan approval required. However, per Article 7-1.09 of the Calvert County Zoning Ordinance, the applicant shall submit an Improvement Plan and bond estimate to address any required site amenities including, but not necessarily limited to, the sidewalks, bike paths, pathways, street trees, street lighting, recreational facilities (including the community center), as well as all required landscaping. The Improvement Plan and bond estimate shall be submitted to the Dept. of Planning and Zoning for review and approval prior to

final plat approval. Bonding for the required amenities shall be posted with the Public Works Agreement. A note referencing the Improvement Plan and bonding shall be included on the final plat.

- 8. The developer shall be responsible for construction of all the required amenities and a homeowners/property owners association shall be responsible for the maintenance of the amenities. Per Article 7-1.06.S.4 of the Calvert County Zoning Ordinance, when areas are reserved for common use by all property owners in the subdivision, a trust agreement (i.e. covenants) shall be made a part of the deed restriction and shall provide for the development and perpetual supervision and maintenance of the common areas and improvements. Prior to final plat approval, the applicant shall also provide documentation that such covenants have been executed. Per previous Planning Commission policy, a statement must also be provided on the final plat and signed by the applicant stipulating that prior to settlement, all purchasers of lots are to be fully informed of the existence of covenants, the extent of the common areas and facilities and the responsibilities of each homeowner to participate in the costs and maintenance of the common areas and facilities.
- 9. The following names have been approved by Planning & Zoning and shall be shown on the final plats; for the public right-of-way, Admiral Hewitt Drive, Creek View Drive, Ensign Road, Fairwinds Road, Gerald Way, Hazelton Road, Mainsail Way, Reveille Road, Riverwatch Drive, Victory Lane, and Whitecap Road (note: Dowell Road, Belle Field Road and Foxhall Road will be used as they are extensions of existing roads). For the Alleyways: Aweigh Place, Boom Place, Bosun Place, Drouge Place, Cringle Place, Gull Place, Marlin Place, Mooring Place, Tiller Place, Sail Place, Skipper Place, Sloop Place, and Shipyard Place.
- 10. House numbers are to be shall be assigned off of the public right-of-ways only and shall in no case be assigned off of an alleyway. This shall be noted on the final plat. The assigned house numbers shall be shown on the final plat. The assigned house numbers will be provided at time of final plat review.
- 11. All site development within this subdivision (including signage and the renovation of the existing house into a clubhouse) is subject to Architectural Review in accordance with P.F.Z.O, Chapter Section VII. A note to this effect shall be included on the final plat.

#12/

Environmental - Wetlands, Floodplain, Conservation Areas and Associated Buffers

- 12. Indicate on the final plat the 100-year floodplain areas that exist on-site. A minimum 10' setback must also be provided adjacent to all 100-year floodplain areas. Label all 100-year floodplain areas and required setbacks on the final plat and place a note on the plat stating that no residential construction will be permitted within the 100-year floodplain.
- 13. A Jurisdictional Determination of Wetlands (JD) was approved by the Army Corp. of Engineers and accepted by the Environmental Planner. A Wetland Evaluation Report prepared By McCarthy & Associates, Inc. in March 2001 was also submitted and accepted by the Environmental Planner. All tidal and non-tidal wetlands must be

delineated on the final plat. A minimum 50' undisturbed natural vegetation buffer shall be maintained from the boundaries of the non-tidal wetland landward. Per Article 8, of the County Zoning Ordinance, label the wetlands and 50' wetland buffer on the final plat and place a note on the plat indicating that, "the non-tidal wetlands and associated buffer areas are to be left undisturbed in perpetuity and are to serve for water quality benefits." The amount of non-tidal wetlands (in acres) shall be included on the final plat.

- 14. Show not only the lateral lines but also the required setback for the lateral lines on the final plat.
- 15. Development within the Critical Area, IDA requires that there be a 10% reduction in pollutants. The calculations have been provided and must be carried out through the road construction and stormwater management plans. A note shall be added to all subsequent plans and plats.
- 16. Per the Solomons Master Plan and Zoning Ordinance (Chapter VIII.a), the 30' buffer area (within the E-1 Sub-district) and the 100' buffer/ extended buffer (within the E-3 Sub-district) shall be clearly delineated on all subsequent plats and plans. The 100' buffer area shall be designated as a non-disturbance area except to the minimum extent necessary for the provision of a pervious pathway. The following conditions apply to the 30' buffer area (within Sub-district E-1), no parking is permitted within the buffer/setback, all structures are to be of pervious surface materials, no decks may be higher than 5' above ground level and only water dependant facilities are permitted (per COMAR definitions). A note to this effect shall be included on in the covenants deeds, plats and plans.

There are existing improvements that encroach into the 30' buffer, primarily on the residue. Where feasible, the improvements must be relocated outside of the buffer areas. Any remaining or proposed encroachment must meet the Critical Area regulations and Solomon Town Center Zoning Ordinance requirements.

17. Native vegetation shall be established in the required Critical Area Buffers. Wherever practical, permeable areas (outside the buffers) shall also be established in native vegetation and redevelopment shall reduce existing levels of pollutions. Street trees and park plantings would in part be an acceptable method of fulfilling this requirement. This shall be addressed on the Improvement Plan.

This requirement is also consistent with the Solomons Master Plan (Chapter III.5, page 52) that states that the impacts of noise and lighting from waterfront development can be significantly reduced, if not altogether eliminated, by requiring adequate landscape buffering along the waterfront in new developments.

- 18. Where walkways and other development impact wetlands or wetland buffers, State and/or Federal permits may be required. A note to this effect shall be included on all subsequent plats and plans.
- 19. All walkways and paths in or adjacent to the required buffers shall be designed using

pervious surface material. Construction of the walkways shall be done in such a manner as to minimize disturbance within the buffers.

20. <u>Critical Area Commission</u>

€ > (21

All of the comments in the Critical Area Commission letter dated March 21, 2006 must be resolved or met prior to final plat approval (attached).

Historic District Commission

- 22. The applicant/land owner shall arrange for the HDC or its designee, to conduct an Archeological Assessment of the site prior to the issuance of any demolition, grading and or building permits. A note to this effect shall be included on the final plats.
- 23. Per the HDC memos of April 28, 2006 and May 5, 2006, the property was once site of a Navel Amphibious Training Base (ATB). Several buildings associated with the ATB have been included on the Maryland Inventory of Historic Properties (CT-800) Based the general policies set forth in the Solomons Master Plan (Chapter II.C.9, pg 44) and the HDC comments, staff recommends that those structures identified by the HDC (and any other historically significant structures subsequently found by the Archaeological Assessment), be preserved on-site and integrated into the proposed development. If this is not possible, staff recommends that the structures be made available to the HDC for relocation. The HDC also recommends that the applicant consider the benefits of placing (at a minimum) the Officer's Quarters into a Historic District.
- Other archaeological sites have been located in the vicinity of this project. Consequently, it is possible that archaeological remains will be encountered during site preparation. The developer/contractor shall notify the HDC if, during construction, any archaeological artifacts are discovered on-site. A note reflecting this condition shall be added to the final plat.

<u>Public Works and State Highway Administration</u> - Road Standards and Stormwater Management <u>DPW</u>, <u>Engineering Bureau</u>

- 25. The applicant's surveyor shall certify on the plat that the locations of all subdivision street intersections and entrances meet or exceed AASHTO sight distance criteria for the posted speed of the road. An easement shall be provided on the final plat to accommodate the sight distance triangles.
- 26. The applicant's surveyor shall certify on the plat that an entrance location exists along the lot, be it on a public road or alley that meets or exceeds the sight distance requirements of the Calvert County Road Ordinance.
- 27. A shared driveway shall serve Lots 249 & 250. An easement shall be shown on the final plat to facilitate this. A deed of easement shall be submitted for recordation with final plats.
- 28. All subdivision street curves shall be designed to meet the minimum standards as set forth in the Calvert County Road Ordinance. Show horizontal curve data on the final plat.

- 29. All lots shall be restricted to interior road access.
- 30. All driveways shall be a minimum of 60' from intersection fillets.
- The subdivision streets shall be designed to meet the roadway standards of the current Calvert County Road Ordinance in effect at the time of road plan review.
- 32. Note on the plats that the proposed alleys shall be private, non-County owned and maintained and shall not be petitionable in perpetuity to the County for county ownership or for County maintenance. The developer shall be responsible for providing for the construction and the lot owners shall be responsible for maintenance including snow removal and repairs as well as other improvements and road service normally provided by the County.
- 33. A widening strip of sufficient width to provide for an ultimate 60' right-of-way along Dowell Road shall be dedicated to the County. The deeds for the widening strips shall be submitted for recordation with the recording package.
- 34. Landscaped islands within County rights-of-way must be deeded to the homeowner's association; the County will not be responsible for their maintenance. This Department must approve plantings within the islands in order to insure adequate sight distance is maintained.
- 35. The road around the divided portion of relocated Dowell Road shall have 18' wide lanes and be signed one-way.
- 36. Mainsail Way and Gerald Way may be reduced to a 30' public rights-of-ways provided that they are designated as "one-way" streets.
- 37. Final road plan approval from the Dept. of Public Works is required prior to final plat recordation.
- 38. Previous Transportation comments #4 & #5 from the memo dated March 3, 2006 no longer apply, per the revisions made to the preliminary plan as requested by this Department.
- 39. Dowell Road improvements to be done as part of this subdivision shall include the following:
 - The design and construction of Dowell Road from the southern property line of the pump station lot on the west side of Dowell Road to its terminus on the Harbours at Solomons (HAS) project.
 - Dowell Road Design Speed is to be 40 miles per hour (mph). Posted Speed is to be 30 mph.
 - The pavement structure as provided by URS shall be used for the HAS section of Dowell Road.
 - Curb and gutter for Dowell Road is to be 8" "A". All other streets in the HAS development can be 6" curb and gutter.
 - All Right-of-Way negotiations and acquisitions along both the County and the HAS
 sections of Dowell Road are to be provided by Calvert County. Plats in both the
 County and the HAS sections are to be provided by URS.
 - The HAS section of Dowell Road is to be a 36' section from Face of Curb (FOC) to face of Curb (18'southbound lane, 18' northbound lane, both lanes striped for 15'

lanes and a 3' space to FOC). The county section of Dowell Road is to be a 40' section FOC to FOC (15' southbound lane, 10' center turning lane, 15' northbound lane). A transition from the 40' three lane County Section to the 36' 2 lane HAS section is to occur in +/- 220' from the southern property line of the pump station on the west side of Dowell Road to the first side street to the west in the HAS development. This transition is to be with a thermo plastic pavement marking or other lane direction device.

- Sidewalk along the HAS section of Dowell Road is to have an 8' bike/sidewalk abutting the curb on both sides of Dowell road to allow a loop for the bike path with out having to cross Dowell Road.
- URS is to provide HAS with the drainage areas for the County Section of Dowell Road draining to the HAS section of Dowell Road. HAS is to investigate the possibility of managing the runoff in the HAS development Stormwater Management (SWM) structure.
- Show all storm drainage easements and points of discharge on the final plat. Note on the plat that no permanent structures are allowed within the storm drain easements.
- 40. Show all storm drainage easements and points of discharge on the final plat. Note on the final plat that no permanent structures are allowed within the stormdrain easements.
- 41. The stormwater management (SWM) study submitted is approved in concept. In accordance with Section 4.1(a) of the SWM Ordinance, the final design of the SWM facilities must be submitted prior to final approval of the subdivision in order that easements necessary for SWM may be shown on the plat.
- 42. In addition to the road improvements required by the County, a mitigation plan for road improvements in the area of Dowell Road, MD Rt. 765 and MD Rt. 2/4 shall be reviewed and accepted by SHA prior to final plat approval.

Water & Sewer

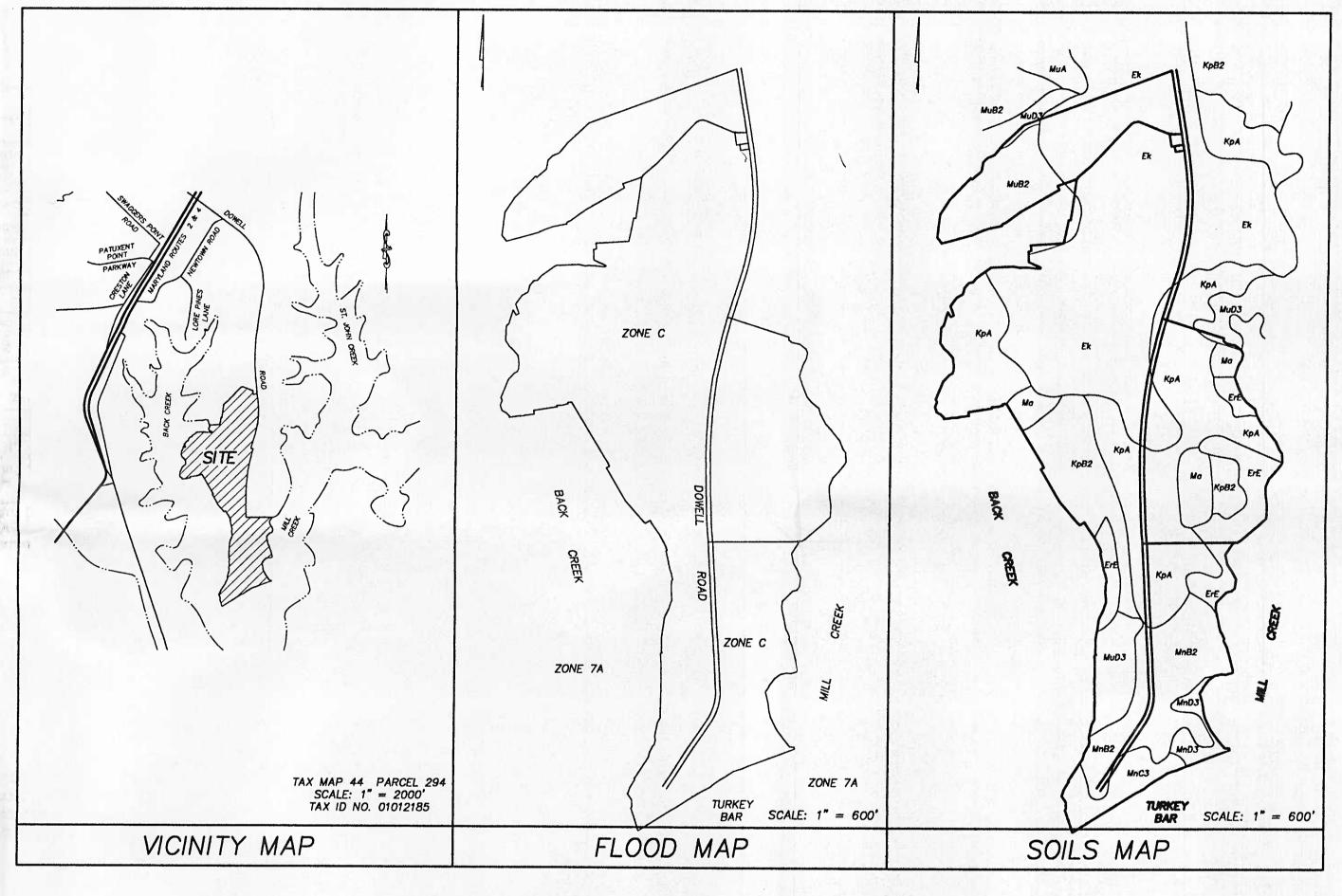
43. Construction plans to finalize the required design of water and sewerage infrastructure must be submitted prior to final approval of the subdivision in order that easements and pump station parcels necessary for community sewer and water may be shown on the plat. It appears that a minimum of two pumping stations will be necessary to accommodate this subdivision. The conveyance of such parcels shall be specified in the Public Works Agreement for the Water and Sewer.

LOCATED ON DOWELL ROAD FIRST DISTRICT, CALVERT COUNTY, MARYLAND FOR: CC GROUP

PERMANENT AND TEMPORARY SEEDING:

- A) SEED PREPARATION: APPLY 100 POUNDS PER 1000 SQUARE FEET OF PULVERIZED LIMESTONE AND 12 POUNDS PER 1000 SQUARE FEET OF 10-20-20 EQUIVALENT FERTILIZER, HARROW OR DISC ON THE CONTOUR INTO THE SOIL TO A DEPTH OF 3 TO 4 INCHES, CONTINUE FILLING UNTIL A REASONABLY FINE SEEDBED HAS BEEN PREPARED.
- B) SEEDING: USE KENTUCKY 31, TALL FESCUE AT THE RATE OF 5 TO 7 POUNDS PER 1000 SQUARE FEET ON A MOIST SEEDBED, MINIMUM COVERAGE - 1/4 INCH - STABILIZED BY MULCHING WITH UNWEATHERED, UNCHOPPED, SMALL GRAIN STRAW SPREAD AT THE RATE OF 1 1/2 TO 2 TONS PER ACRE MULCH TO BE ANCHORED BY ASPHALT TIE-DOWN METHOD, OR APPROVED EQUAL. SEEDING TO BE DONE ONLY BETWEEN FEBRUARY 1ST TO APRIL 15TH OR AUGUST 15TH TO OCTOBER 15TH.
- C) TEMPORARY SEEDING OR SODDING TO BE DONE ON COMPLETION OF CONSTRUCTION GRADING: SEEDING TO BE ROOTED KENTUCKY 31, TALL FESCUE. IF REQUIRED, SOD SHALL BE TRANSPLANTED WITHIN 36 HOURS OF HARVESTING. EACH STRIP OF SOD TO BE PLANTED WITH AT LEAST 2 STAKES SPACED NOT MORE THAN 2 FEET APART.
- D) THE REGULATIONS, COMAR .08.05.01.06, APPLICATION FOR APPROVAL OF EROSION AND SEDIMENT CONTROL PLANS (B)(V) REQUIRE THE APPLICANT TO SUBMIT (IV) DETAILS OF INCLUDING PLACEMENT OF THE FOLLOWING STATEMENT ON THE PLAN FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
- 1) SEVEN CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND:
- 2) FOURTEEN DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- E) THE REQUIREMENTS OF COMAR .08.05.01.06, (B)(3)(IV)DO NOT APPLY TO THOSE AREAS WHICH ARE SHOWN ON THE PLAN AND ARE CURRENTLY BEING USED FOR MATERIAL STORAGE, OR FOR THOSE OF A SURFACE MINE SITE WHERE THE STABILIZATION MATERIAL WOULD CONTAMINATE THE RECOVERABLE RESOURCE. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE THAT STABILIZED AREAS CONTINUOUSLY MEET THE APPROPRIATE REQUIREMENTS OF THE "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS" (1994), WHICH IS INCORPORATED BY REFERENCE IN REGULATION .08.05.01.10.

SLOPE SEEDING TO BE MSHA MIX NO. 1C.



SEDIMENT AND EROSION COI	VTROL	TABL	Ε
DISTURBED AREA		25.27	AC±
TREE CLEARING	_	19.10	AC±
STABILIZED CONSTRUCTION ENTRANCE SCE	-	1	EA
SILT FENCE	_	3,738	LF

1. DISTURB ONLY WHERE NEEDED TO INSTALL REQUIRED EROSION AND SEDIMENT CONTROL PRACTICES, & CLEARWATER DIVERSIONS. ONLY CLEARING TO TAKE PLACE IS FOR THE INSTALLATION OF PONDS, CLEARWATER DIVERSIONS, & PERIMETER DEVICES.	5 DAYS
2. INSTALL EROSION AND SEDIMENT CONTROL PRACTICES WHERE INDICATED ON THIS APPROVED EROSION AND SEDIMENT CONTROL	
PLAN. 3. CONTACT THE APPROPRIATE INSPECTING AGENCY. NO FURTHER CLEARING, GRADING, OR OTHER LAND DISTURBANCE ACTIVITY IS PERMITTED UNTIL THE INSPECTING AGENY CERTIFIES THAT ALL REQUIRED EROSION AND SEDIMENT CONTROLS ARE PROPERLY INSTALLED ACCORDING TO THE RELEVANT CONSTRUCTION STANDARD. ALL OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THE INITIAL APPROVAL BY THE INSPECTING AGENCY IS GIVEN. 4. SEDIMENT CONTROL PRACTICES WILL BE MAINTAINED ACCORDING TO THE MARYLAND 1994 STANDARDS AND COUNTY REGULATIONS, UNTIL THE ENTIRE SITE IS STABILIZED, INSPECTED, AND FINAL APPROVAL	10 DAYS
IS GIVEN BY THE APPROPRIATE STATE/COUNTY AGENCY. 5. DEMO CONCRETE & FOUNDATIONS THEN CLEAR & GRUB SITE TO THE LIMITS SHOWN.	70.0400
6. PERMANENTLY TOPSOIL, FERTILIZE, SEED AND MULCH DISTURBED	30 DAYS
AREAS.	5 DAYS
7. CONTACT THE INSPECTING AGENCY FOR FINAL INSPECTION. 8. REMOVE SEDIMENT CONTROL.	1 DAY 10 DAYS
TOTAL ESTIMATED TIME OF CONSTRUCTION:	61 DAYS

*ITEMS THAT CAN BE DONE CONCURRENTLY

DESCRIPTION	EXISTING	PROPOSED
BENCHMARK		
BUILDING		
CONTOURS	20	
CURB	22 102 00 000 000 per the per the per to the per the p	
GUARD RAIL		
PROPERTY LINE/RIGHT-OF-WAY LINE		
Ç LANES		
RIPRAP OR SURGE STONE		
CONCRETE	WINITED.	
LIMIT OF DISTURBANCE		*************************
SILT FENCE		SF
STABLIIZED CONSTRUCTION ENTRANCE		B888
STORMDRAIN		
SPOT ELEVATION	x 123.45	
TREE LINE	www	uuuu
UTILITY - OVERHEAD WIRES	ОНИ	
UTILITY POLE	•	
SIDEWALK / CONCRETE		

INDEX OF DRAWINGS

COVER, NOTES & DETAILS	1 OF
DEMOLITION, CLEARING AND SEDIMENT & EROSION CONTROL PLAN	2 OF
DEMOLITION, CLEARING AND SEDIMENT & EROSION CONTROL PLAN	3 OF
SEDIMENT & EROSION CONTROL DETAILS	4 OF

CAUTION - NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS. TEST PITS TO BE PERFORMED PRIOR TO EXCAVATION WORK PROCEEDS TO DETERMINE THE EXACT LOCATION OF EXISTING UTILITIES. NOTIFY UTILITIES COMPANIES 48 HOURS PRIOR TO COMMENCING WORK IN

SURVEYOR'S / ENGINEER'S CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL MEETS THE REQUIREMENTS, STANDARDS AND SPECIFICATIONS OF THE CALVERT COUNTY SOIL CONSERVATION DISTRICT. DANIEL J. KELSH MD PE #17627

OWNER'S / DEVELOPER'S CERTIFICATE

I HEREBY CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AN THAT ANY PERSON OF RESPONSIBILITY INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT, I HEREBY AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUTION BY STATE OF MARYLAND, DEPARTMENT OF THE ENVIRONMENT, COMPLIANCE INSPECTORS.

9Y:		DATE:	
	CC GROUP (REP)		

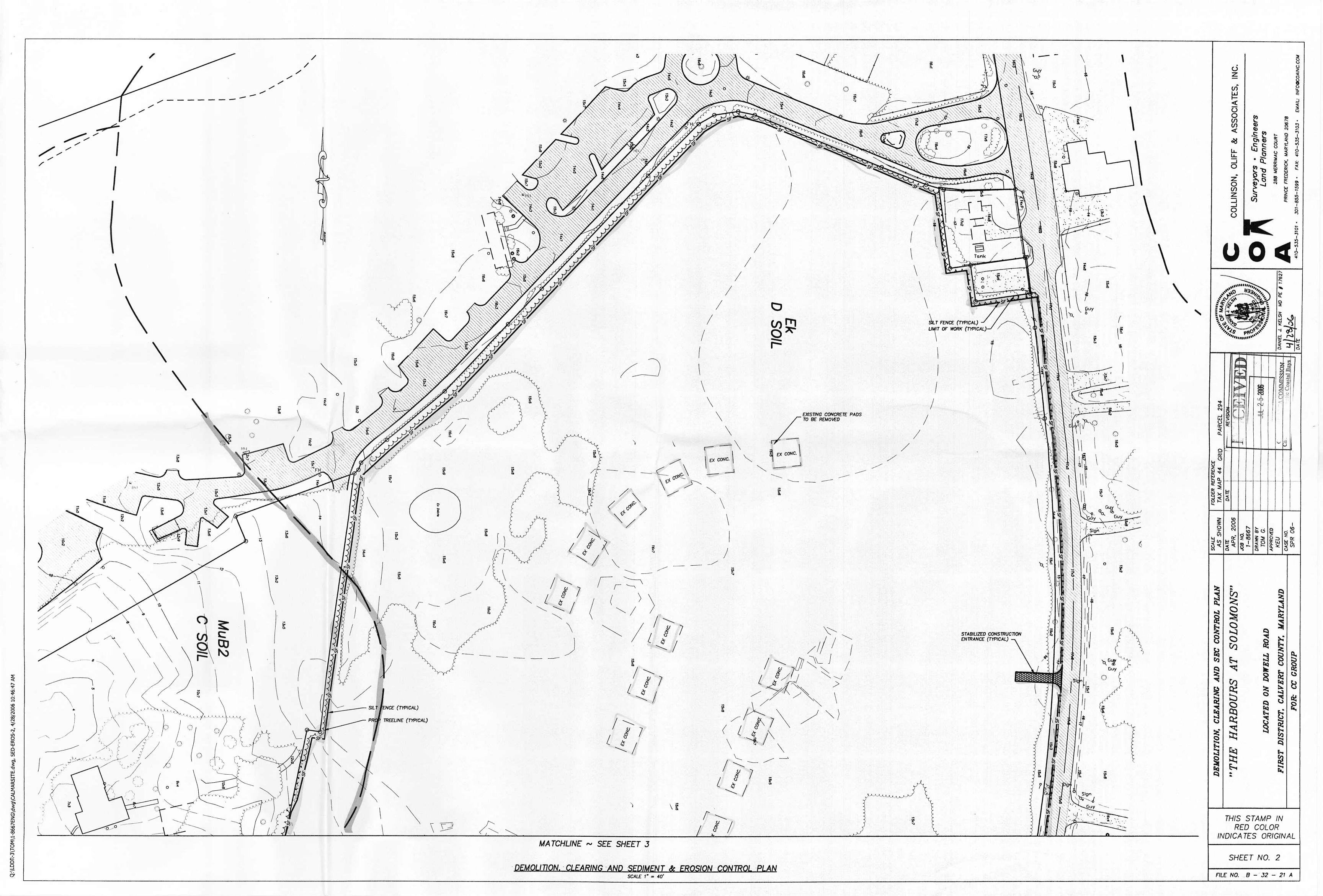
OTOMON NO

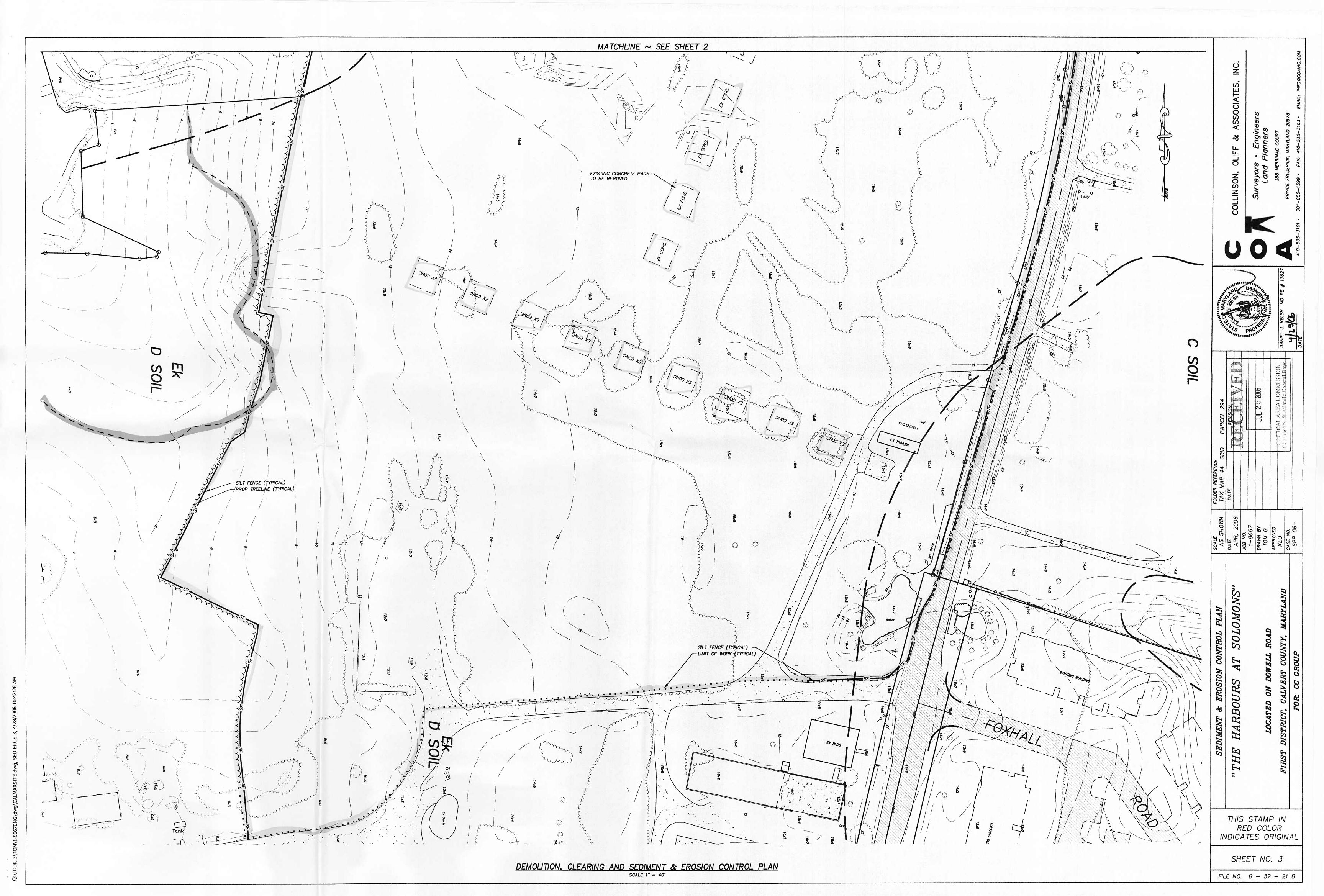
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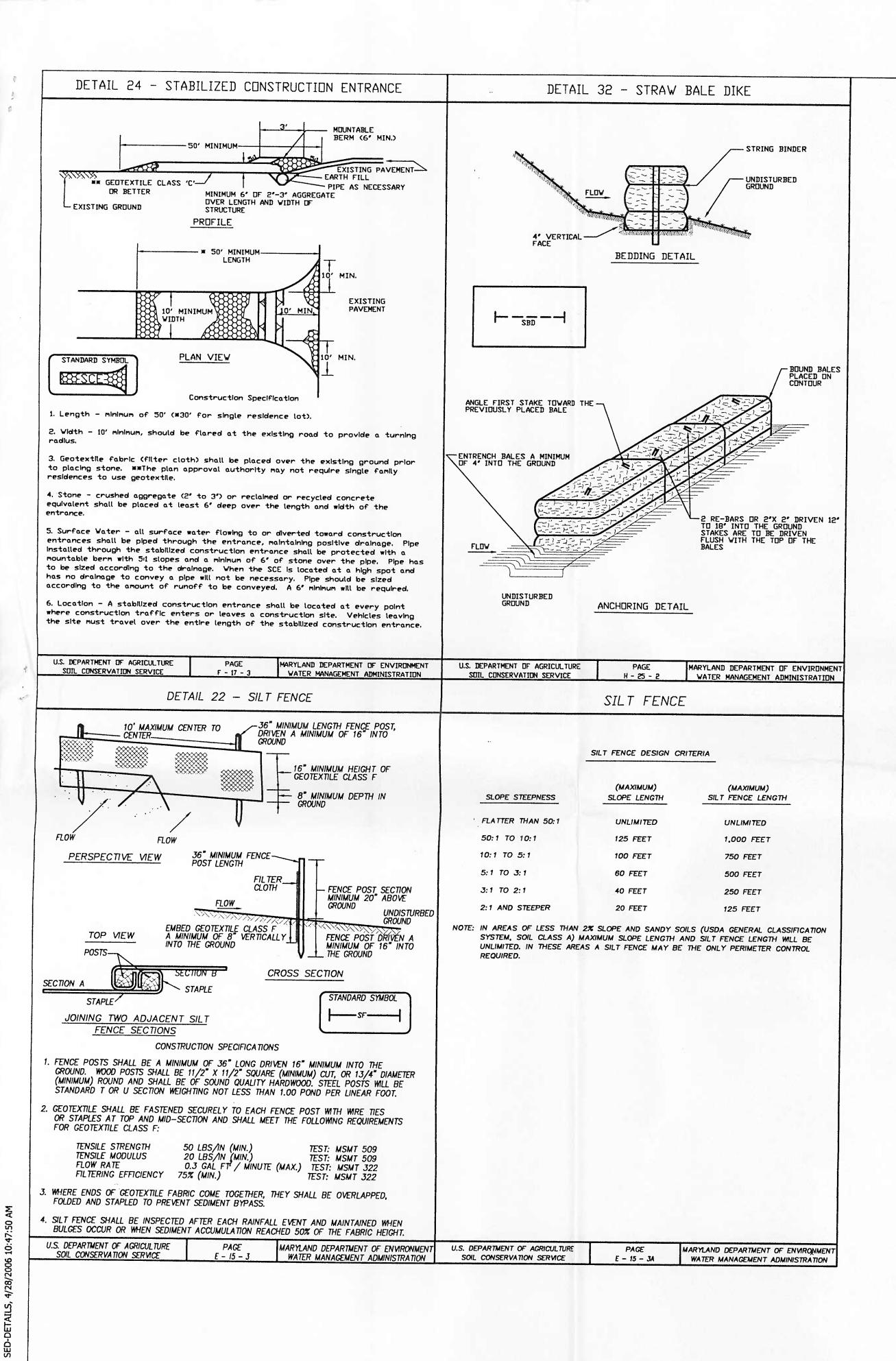
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SHEET NO. 1

FILE NO. B - 32 - 21







COLLINSON, CONTROL DETAILS
AT SOLOMONS ATRBOURS THIS STAMP IN RED COLOR INDICATES ORIGINAL

SHEET NO. 4

FILE NO. B - 32 - 21 C



CALVERT COUNTY DEPARTMENT OF PLANNING & ZONING

150 Main Street
Prince Frederick, Maryland 20678
Phone: (410) 535-2348 • (301) 855-1243

Director Gregory A. Bowen

May 26, 2006

Board of Commissioners Gerald W. Clark David F. Hale Linda L. Kelley Wilson H. Parran Susan Shaw

Critical Area Commission Attn: Ms. Kerrie Gallo 1804 West Street, Suite 100 Annapolis, MD 21401

Subject: Harbours at Solomons

Dear Kerrie,

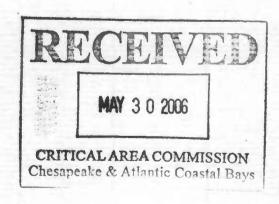
Enclosed is the Staff Report for Harbours at Solomons that you requested from Olivia on 18 May 2006.

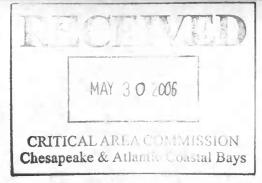
If you need additional information, please do not hesitate contacting us.

Sincerely,

Becky Parkinson Office Assistant II

enc





Planning Commission Presentation 05-17-06

SD 02-08A, Harbours at Solomons

The site is located at the end of Dowell Road in Dowell. Oyster Bay Condominiums is located to the north of the site. Windward Harbour Condominiums and Mill Creek Condominiums, both of which were derived from the original parent tract, are located on the east side of Dowell Road across from the property. The site now consists of a 97.743± acre residue parcel (Parcel 294). The parcel is located within the Sub-districts, E-1 and E-3 of the Solomons Town Center. The site is also located within the Critical Area's Intense Development Area (IDA). The application was accepted as adequate for distribution on February 14, 2006 and is therefore, subject to the Zoning Ordinances in effect prior to the May 1, 2006 amendments.

The property is located on a peninsula that is surrounded by Back Creek and Mill Creek. The site is currently developed with numerous structures including approximately 337 commercial piers. Some of the existing buildings support marina related businesses including the Southern Maryland Sailing Association, Washburn's Boatyard, and Custom Marine Fabrications. There is also full service restaurant and carryout located on-site as well as the Dowell Post Office. The property also contains a number of buildings/structures that were constructed as part of the U.S. Navy Amphibious Training Base (ATB), which operated from 1942 – 1945 (see HDC comments attached). Some of these structures have been listed on the Maryland Inventory of Historic Properties under CT-800. The applicant is proposing adaptive reuse of one of the structures, the Senior Officer's Quarters, which will be renovated and incorporated into a proposed community center. The HDC applauds this decision and suggests that the applicant consider the benefits of designating the Officer's Quarters as a Historic District. In addition, there are other structures identified by the HDC that are worthy of preservation. Accordingly, the HDC requests that if these buildings cannot be integrated into the project, that they be offered for relocation.

Within the Town Center, non-tidal wetlands are not required to be deducted prior to calculating density. The subdivision application is for 252 single-family detached lots on 69.491± acres, leaving a 28.252 acres residue. The residue will continue to support most of the existing commercial businesses located on the site. Consequently, the residential density can only be calculated on the 69.491 acres. Within the Solomons Town Center, the residential density may be increased to no more than seven units per acre via Transfer Zone. There is no density limit applied within the Critical Area, IDA. With 252 lots, the proposed density equates to 3.63 units per acre. The maximum conventional density in the Solomons Town Center is one unit per acre. The density may be increased to no more than seven units per acre via Transfer Zone and the use of five Transfer Development Rights (TDR's) for each of the 183 units above the conventional density (69 units), for a total of 915 TDR's. The applicant however, is choosing to designate the development as an "age-restricted" community; therefore, no TDR's shall be required.

The Solomons Zoning Ordinance does not set specific requirements for open space and recreation. Consequently, these requirements are taken from Article 7-1.06.S.3 of the Calvert County Zoning Ordinance. Per the Ordinance, 650 sq. ft. of neighborhood recreation must be

provided per unit of which 200 sq. ft. (of 1.157 acres) must be developed with specific recreational facilities. With 252 units, 163,800 sq. ft. (or 3.78 acres) of land suitable for neighborhood recreation must be provided with 50,400 sq. ft. (or 1.16 acres) developed with active recreational facilities. Based upon the criteria set forth in the Ordinance, three open play fields (or village greens) and 5, 292 sq. ft. of paved area facilities (i.e. shuffle board, hand ball, or other formal net games, etc.) must be provided. The applicant is proposing to substitute the standard recreational facilities for ones that better suit the needs of residents 55 years or older. Four mini-parks totaling 45,149 sq. ft. (or 1.036 acres) have been provided throughout the community. In addition, a 7.988 acre parcel will be provided near the southern tip of the property for a large community recreational center. The Senior Officer's Quarters will be renovated and enlarged for use as a community center. There is an existing swimming pool onsite that is currently used by the Southern Maryland Sailing Association and the residents of Windward Harbour. This pool will be relocated adjacent to the community center. A fitness center will also be incorporated into the community center. Originally, it appears that a portion of the recreation area and improvements required for Mill Creek Condo development was located on the subject property. To resolve this conflict, the owner/applicant has conveyed a 1.0+ acre recreation area parcel (located on the south side of the lake) to the Mill Creek Council of Unit Owners. In addition, the applicant has extended an offer to the both Windward Harbor and Mill Creek homeowners associations to participate in the use of the community center and pool complex. The mini-parks and the 7.988 acre community center parcel will be conveyed to a Homeowner's Association.

As proposed, the subdivision layout does not provide the residents with any common area water frontage. The site's waterfront has been included within the residue parcel to be retained by the current landowner for possible future marina related development. The landowner has agreed to the provision of a pervious surfaced pathway to be constructed along the length of the waterfront that may be used by the residents. This pathway will run from the commercial marina on Back Creek to the Community Center and to Mainsail Way adjacent to Mill Creek. Portions of this pathway will be placed primarily within the Critical Area buffer. Sidewalks will also be provided along both sides of the public streets. Furthermore, the sidewalks will be widened to 8' along the west side of Dowell Road and the interior loop road, to serve as a bike lane.

Vehicular access to approximately 194 of the lots will be via 20' wide alleyways. These alleyways will range in length from 150' linear feet (serving 3 lots) to approximately 635' (serving 22 lots). The Calvert County Zoning Ordinance defines an alley as, "A public or private right-of-way that connects two or more streets and is intended to provide access to the rear or side of a building or lot. It is intended for local traffic only." Otherwise, neither the Solomons Zoning Ordinance nor the Calvert County Zoning Ordinance addresses the use alleyways within residential subdivisions. All lots with access to an alleyway will have rear-loaded garages. It should be noted that the alleyways have not been designed as separate right-of-ways parcels but instead, will be located over the common rear lot lines and situated within the rear setbacks of the lots. The alleyways will be managed and maintained by a Homeowners Association. The remainder of the lots (58) will have access from a public right-of-way with front load garages. Two of the public right-of-ways (Gerald Way and Mainsail Way) have been reduced to 30' in width, which is permitted under Article 7-1.06.D.8 of the Calvert County Zoning Ordinance. The reduction has also been, approved by the Dept. of Public Works with the condition that the streets be restricted to "one-way" movement.

Two exterior parking places must be provided on each lot and 15% overflow parking must also be provided within an easy walking distance of the majority of the units. The required overflow parking will be met primarily with parallel parking incorporated into the public right-of-way. In addition to the residential parking requirements, the applicant was required to document that there was adequate parking to serve the existing facilities, including 437 commercial boat slips (at a rate on one parking space per two slips, plus 15% overflow parking), two restaurants (at a rate of one parking space per 50 sq. ft. of floor area) and the proposed community center. A parking plan was submitted which indicated that based upon the requirements, 936 spaces will be required and 1,204 parking spaces will be provided. However, it should be noted that a portion of the parking spaces required for the commercial slips are located on the residue, adjacent to the commercial buildings that support the marina related businesses. Parking counts were not provided for these building/businesses so, the parking plan may have to be revised as part of the required Improvement Plan and additional parking spaces provided on the residue to accommodate these buildings/businesses.

There are two waterfront parcels (Parcels 531 and 548, currently under one ownership) located north of the commercial portion of the residue, which have limited access via an easement through the Oyster Bay Condo development. The contract purchaser of the parcels has requested additional access be provided through this subdivision proposal. The applicants have provided a 50'wide future right-of-way to the parcels. The use of this right-of-way, however, will have to be negotiated by the owner of the adjacent parcels.

Comments from the Utilities Bureau indicate that the subdivision is located within the existing boundaries of the Solomons Sanitary District Service Area and will be served by an existing water and sewer system. The project is in conformance with the current Calvert County Comprehensive Water and Sewer Plans for Water Planning Category W-1 and Sewerage Planning Category S-1 (Existing and/or Under Construction). Furthermore, the Solomons Sanitary District water supply and sewerage systems have adequate capacity to serve this proposed project, taking into account all existing and all approved proposed developments within in this service area. Upgrades and extensions of the systems including the addition of at least two pumping stations may be required. Construction plans for the extensions/upgrades of the water and sewer systems to serve this site must be approved prior to final plat approval.

As part of the subdivision approval, road improvements in the area of Dowell Road and MD Rt. 275 are anticipated through the State Highway Administration (SHA). The applicants have met with SHA to development a mitigation plan but SHA has not completed their traffic analysis. As with the water and sewer plans, staff is recommending that the road mitigation plan be approved prior to final plat approval.

With regard to the environmental aspects of the plan, the Critical Area Commission (CAC) has questioned whether subdivisions within the Buffer Exempt Area of the IDA is permissible under the County's Zoning Ordinances. It is their position that the 100' buffer should be maintained until such time that criteria for subdivisions within these areas have been approved by the CAC and adopted by the County. There is no wording within the applicable Zoning Ordinances that prohibits subdivision within the IDA buffer exempt area. Consequently, it is staff's position that although there is no specific criteria, there is an acknowledged 30' buffer required within the

Buffer Exempt Area as set forth in the Solomons Master Plan and Zoning Ordinance to which the application must adhere.

The following agencies have submitted comments:

Engineering memo dated:

05-02-06

Transportation memo dated:

03-03-06 & 05-01-06

Environmental memo dated:

05-03-06, 05-08-06 & 05-11-06

Critical Area Com. memo dated:

03-21-06

MD Dept. Natural Res. memos dated:

03-16-06

MD Dept. of Environment memo dated:

003-16-06

SHA memo dated:

05-04-06

Historic District Com. memos dated:

04-28-06 & 05-05-06

Water and Sewer memo dated:

05-08-06

Army Corp of Engineers (JD):

08-22-01

The Department of Planning and Zoning has reviewed the proposed subdivision, SD02-08A, The Harbour at Solomons, 252 single-family detached lots and the review agency comments and recommends preliminary approval, subject to the following conditions:

Section I - Subdivision Layout and Design

- 1. Site development shall comply with all of the policies and requirements of the Solomon's Town Center Master Plan and Zoning Ordinance, and the Calvert County Zoning Ordinance in effect prior to the May 1, 2006 amendments.
- 2. The application shall be subject to meeting all of the requirements of the Critical Areas, IDA zone. This shall be noted on all subsequent plans and permits.
- 3. Per Article 5-2.02.C.3.c of the Calvert County Zoning Ordinance, each lot shall have a 25' minimum of frontage along a public right-of-way, except for two adjacent flag lots where the frontage for each lot may be reduced to 12.5' with the provision of a shared driveway and required easements.
- 4. Per Article 7 of the Calvert County Zoning Ordinance, the Planning Commission may

require sidewalks. The Solomons Master Plan also specifies the provision of sidewalks in developments containing over 10 lots, in order to maintain and enhance the sense of community. The Master Plan also specifies, "sidewalks are deemed necessary and all pedestrian circulation and automobile traffic should be separated and clearly defined". Therefore, staff recommends that sidewalks (min. 5' in width) be provided on both sides of all public rights of ways. Furthermore, the sidewalk shall be a minimum 8' in width along the west side of Dowell Road and along the primarily internal loop road to serve as a bike lane. Easements shall be provided on the final plats for the installation and maintenance of the sidewalks that are located outside the public rights-of-way. A note shall be added to the final plat indicating that the sidewalks shall be constructed by the developer and maintained by the individual property owner or the homeowner's association. A deed for the easement shall be submitted with the recording package.

- 5. Per the Solomons Master Plan and Zoning Ordinance (V-9) a bike path is required along the western side of Dowell Road. A minimum 8'wide bike path/lane shall be provided along Dowell Road and the primarily internal loop road (Creek View Dr., Riverwatch Dr. south of Dowell Rd. and Adm. Hewitt Drive, between Creek View Dr. and Riverwatch Dr.). The design of the bike path shall be included in both the road construction plans and Improvement Plans.
- 6. The Solomons Zoning Ordinance does not set specific requirements for open space and recreation. Consequently, these requirements are taken from Article 7-1.06.S.3 of the Calvert County Zoning Ordinance. A minimum 650 sq. ft. of neighborhood recreation must be provided per unit, of which 200 sq. ft. must be developed with specific recreational facilities. With 252 units, 163,800 sq. ft. (or 3.78 acres) of land suitable for neighborhood recreational must be provided with 50,400 sq. ft. (or 1.16 acres) developed with active recreational facilities.

The minimum recreational facilities to be provided are as follows:

Playing Fields/Village Greens:

150 sq. ft. per unit; min. size per field: 10,000 sq. ft., Dimensions: 100' X 100'.

252 (units) X 150 = 37,800 sq. ft. = 3.78 fields, which equates to 3 fields with 7,800 sq. ft. remaining to be applied to satisfy other rec. facilities.

Paved Area:

21 sq. ft. per unit

Dimensions: Min. ½ court: 50' X 42' (2,100 sq. ft) or whole court: 50' X 84 (4,200 sq. ft.) (i. e. basketball, shuffleboard, handball, or other formal net games, etc.)

252 (units) X 21 = 5,292 sq. ft. = two $\frac{1}{2}$ courts or one full court, with 1,092 sq. ft. remaining for other rec. facilities.

The Planning Commission may approve variations in size and dimensions of the required recreational facilities.

Other Recreation:

Facilities from remaining acreage (i.e. fishing piers, fitness trails outdoor theaters, etc.) 7,800 sq. ft. (open play) + 1,092 sq. ft. (paved area) = 8,892 sq. ft. of additional rec. area required

Proposed:

Playing Fields/Village Greens:

Four mini-parks (two under the 10,000 sq. ft. minimum) totaling 45,149 sq. ft. (or 1.036 acres), to be located throughout the community. In addition, a 7.988 acre parcel will be provided near to the southern tip of the property for a community recreational center.

Paved Area:

To be determined with Improvement Plan.

Other Recreation: (7,800 sq. ft).

Community Center with pool and fitness center (on the 7.988 acre parcel). The Senior Officer's Quarters will be renovated and enlarged for use as the Community Center. Actual size (sq. ft.) of community center and pool complex not yet determined. Provision of a pathway along the waterfront from the restaurant on Back Creek to the Mainsail Way on Mill Creek.

Staff has reviewed the proposed neighborhood recreation. With the exception of meeting the paved areas requirement, this proposal appears to be consistent with the intent of the Ordinance. The amount of land provided for recreation far exceeds the required acreage. With regard to the proposed recreational facilities, staff recommends that the remaining recreational facilities requirements be worked out as part of the required Improvement Plan to ensure that the facilities are appropriate for the age group of the residents. Staff also recommends that in accordance with the Environmental recommendations for planting within the pervious areas of the site, that the neighborhood recreation areas, including the 7.8 community center parcel, be landscaped as part of the Improvement Plan.

 Per Article 7-1.06.D.6 of the Calvert County Zoning Ordinance, if a portion of a tract or an adjacent parcel is not subdivided, suitable access to street openings for eventual extension of the streets shall be provided.

There are two waterfront parcels, Parcels 531 and 548 (currently under one ownership) situated between the commercial residue and Oyster Bay Condominiums that have limited access via an easement through the Oyster Bay development. In accordance with the above provision, the contract purchaser of the parcels has requested additional access be provided through this subdivision proposal. The applicant has set aside a 50'wide future right-of-way, between Lots 18 and 19 (off of Creek View Drive) for access to the parcels. The 50' wide future right-of-way to Parcels 531 and 548 shall be shown and noted on the final plat.

- 8. The alleyways, as shown on the preliminary plan, shall maintain a minimum width of 20' (10' on each side of the common property line of the residential lots). The alleyways shall be constructed by the developer to standards set forth by DPW. The alleyways shall be managed and maintained by a Homeowners Association. Access easements for the alleyways shall be shown and noted on the final plats. A deed of easement shall be provided for recordation with the final plats.
- 9. Article 7-1.06.D.8 of the Calvert County Zoning Ordinance, two of the public rights-of-ways (Gerald Way and Mainsail Way) may be reduced to 30' in width provided that the streets be restricted to "one-way" movement and indicated as such on the final plats.

Section II- Minimum Requirements and Standards

<u>Planning and Zoning - Subdivision Regulations and Zoning Ordinance</u>

- 1. Provide signed certificates by the Health Officer, surveyor and owner on the final plat.
- 2. The subdivision application is for 252 single-family detached lots on approximately 69.491 acres, leaving a 28.252 acres residue. The residue will continue to support most of the existing commercial businesses located on the site. Consequently, the residential density can only be calculated on the 69.491 acres*. Within the Solomons Town Center, the residential density may be increased to no more than seven units per acre via Transfer Zone. There is no density limit applied within the IDA. With 252 lots, the proposed density equates to 3.63 units per acres. Five Transfer Development Rights (TDR's) are required for each of the 183 units above the new base density of 69 units, for a total of 915 TDR's.
 - * In reviewing the site plan files for Mill Creek Condominiums and The Harbour at Solomons (SPR 97-24 and SPR 02-36), it appears that ½ of the right-of-way for Dowell Road fronting these developments (a 1.069 acre widening strip) was included in the density calculations for the condo units. This portion of the right-of-way has also been included on the subject preliminary plan (for dedication purposes) and appears to have counted in the overall acreage. In addition, staff would like verification that the 1.0± acre recreation area parcel that was conveyed to Windward Harbor was not included in the overall acreage. Staff recommends that any areas within the residential portion of the site that are required to satisfy the parking requirements for the commercial marina of existing businesses be subtracted from the residential acreage and that the applicant's engineer provide revised acreage and density figures prior to final plat submittal. Staff considers these adjustments to the plan minor in nature, as they are not expected to result in changes to the layout of number of lots proposed herein.
- 3. Within the Solomon's Town Center, the density may be increased up to no more than seven units per acre with the use of five Transfer Development Rights (TDR's) for each lot above the permitted conventional density of 69 units.

The applicant has chosen to designate the development as an "age-restricted"

community. Per Section VII.D.2.b of the Solomons Zoning Ordinance, "The use of Transfer Development Rights (TDR's) shall not be required for elderly (age-restricted) housing developments limited to individuals fifty-five (55) years of age or older. As part of the final plat approval, however, a declaration of covenants shall be submitted for recordation among the land records of Calvert County. The covenants shall be referenced on the final plats and all subsequent development plans. The Declaration of Covenants shall specify to the property owners and residents of the subdivision, the restrictions for elderly housing and the requirements that shall apply, if the project is converted to general housing in the future.

4. The final plat shall include the required setbacks as set forth in accordance with the Chapter VII.D.2.c-e (and Table 2) of the Solomons Zoning Ordinance. The Ordinance permits developments in the E-1 and E-3 Sub-districts to reduce the minimum lot width below 75' (no further minimum is cited) provided that certain parking requirements are met. The height of all structures shall adhere to Chapter VII.D.4 of the Solomons Zoning Ordinance. The height restrictions shall be noted on the final plat.

The applicants are proposing to reduce minimum lot widths within the subdivision below the 75' and therefore, must meet the parking criteria set forth by the provision; specifically, two off street parking places shall be provided for each dwelling per unit and 15% of the total number of parking spaces provided for the lots shall be provided for guest and overflow parking. Such parking can either be provided as on-street parking or as separate parking areas within easy walking distance of the majority of dwelling units within the development. These conditions shall be addressed as part of Condition 5, Section II (below).

- 5. Parking for this development shall comply with the requirements of Chapter VII.D.2.D.6 and D.7 (as applicable) of the Solomons Zoning Ordinance and Article 6-2 of the Calvert County Zoning Ordinance. This shall include all proposed development and the existing development to remain on the site (including the residue parcel). The parking counts and parking plan shall be revised as necessary prior to final plat submittal. The required parking for the proposed and existing facilities shall be shown and noted on the final plats.
- 6. Per Article 7-1.05.D.4 of the Calvert County Zoning Ordinance, the age-restricted subdivisions are exempt from meeting the requirements Adequate Public Facilities Ordinance (APFO) for school adequacy (capacity). The subdivision must still meet the APFO requirements for roads prior to final plat approval. A note to this effect shall be included on the final plat.
- 7. As the proposal is for a single family-detached subdivision there is no separate Site Plan approval required. However, per Article 7-1.09 of the Calvert County Zoning Ordinance, the applicant shall submit an Improvement Plan and bond estimate to address any required site amenities including, but not necessarily limited to, the sidewalks, bike paths, pathways, street trees, street lighting, recreational facilities (including the community center), as well as all required landscaping. The Improvement Plan and bond estimate shall be submitted to the Dept. of Planning and Zoning for review and approval prior to

final plat approval. Bonding for the required amenities shall be posted with the Public Works Agreement. A note referencing the Improvement Plan and bonding shall be included on the final plat.

- 8. The developer shall be responsible for construction of all the required amenities and a homeowners/property owners association shall be responsible for the maintenance of the amenities. Per Article 7-1.06.S.4 of the Calvert County Zoning Ordinance, when areas are reserved for common use by all property owners in the subdivision, a trust agreement (i.e. covenants) shall be made a part of the deed restriction and shall provide for the development and perpetual supervision and maintenance of the common areas and improvements. Prior to final plat approval, the applicant shall also provide documentation that such covenants have been executed. Per previous Planning Commission policy, a statement must also be provided on the final plat and signed by the applicant stipulating that prior to settlement, all purchasers of lots are to be fully informed of the existence of covenants, the extent of the common areas and facilities and the responsibilities of each homeowner to participate in the costs and maintenance of the common areas and facilities.
- 9. The following names have been approved by Planning & Zoning and shall be shown on the final plats; for the public right-of-way, Admiral Hewitt Drive, Creek View Drive, Ensign Road, Fairwinds Road, Gerald Way, Hazelton Road, Mainsail Way, Reveille Road, Riverwatch Drive, Victory Lane, and Whitecap Road (note: Dowell Road, Belle Field Road and Foxhall Road will be used as they are extensions of existing roads). For the Alleyways: Aweigh Place, Boom Place, Bosun Place, Drouge Place, Cringle Place, Gull Place, Marlin Place, Mooring Place, Tiller Place, Sail Place, Skipper Place, Sloop Place, and Shipyard Place.
- 10. House numbers are to be shall be assigned off of the public right-of-ways only and shall in no case be assigned off of an alleyway. This shall be noted on the final plat. The assigned house numbers shall be shown on the final plat. The assigned house numbers will be provided at time of final plat review.
- 11. All site development within this subdivision (including signage and the renovation of the existing house into a clubhouse) is subject to Architectural Review in accordance with P.F.Z.O, Chapter Section VII. A note to this effect shall be included on the final plat.

Environmental - Wetlands, Floodplain, Conservation Areas and Associated Buffers

- 12. Indicate on the final plat the 100-year floodplain areas that exist on-site. A minimum 10' setback must also be provided adjacent to all 100-year floodplain areas. Label all 100-year floodplain areas and required setbacks on the final plat and place a note on the plat stating that no residential construction will be permitted within the 100-year floodplain.
- 13. A Jurisdictional Determination of Wetlands (JD) was approved by the Army Corp. of Engineers and accepted by the Environmental Planner. A Wetland Evaluation Report prepared By McCarthy & Associates, Inc. in March 2001 was also submitted and accepted by the Environmental Planner. All tidal and non-tidal wetlands must be

delineated on the final plat. A minimum 50' undisturbed natural vegetation buffer shall be maintained from the boundaries of the non-tidal wetland landward. Per Article 8, of the County Zoning Ordinance, label the wetlands and 50' wetland buffer on the final plat and place a note on the plat indicating that, "the non-tidal wetlands and associated buffer areas are to be left undisturbed in perpetuity and are to serve for water quality benefits." The amount of non-tidal wetlands (in acres) shall be included on the final plat.

- 14. Show not only the lateral lines but also the required setback for the lateral lines on the final plat.
- 15. Development within the Critical Area, IDA requires that there be a 10% reduction in pollutants. The calculations have been provided and must be carried out through the road construction and stormwater management plans. A note shall be added to al subsequent plans and plats.
- 16. Per the Solomons Master Plan and Zoning Ordinance (Chapter VIII.a), the 30' buffer area (within the E-1 Sub-district) and the 100' buffer/ extended buffer (within the E-3 Sub-district) shall be clearly delineated on all subsequent plats and plans. The 100' buffer area shall be designated as a non-disturbance area except to the minimum extent necessary for the provision of a pervious pathway. The following conditions apply to the 30' buffer area (within Sub-district E-1), no parking is permitted within the buffer/setback, all structures are to be of pervious surface materials, no decks may be higher than 5' above ground level and only water dependant facilities are permitted (per COMAR definitions). A note to this effect shall be included on in the covenants deeds, plats and plans.

There are existing improvements that encroach into the 30' buffer, primarily on the residue. Where feasible, the improvements must be relocated outside of the buffer areas. Any remaining or proposed encroachment must meet the Critical Area regulations and Solomon Town Center Zoning Ordinance requirements.

17. Native vegetation shall be established in the required Critical Area Buffers. Wherever practical, permeable areas (outside the buffers) shall also be established in native vegetation and redevelopment shall reduce existing levels of pollutions. Street trees and park plantings would in part be an acceptable method of fulfilling this requirement. This shall be addressed on the Improvement Plan.

This requirement is also consistent with the Solomons Master Plan (Chapter III.5, page 52) that states that the impacts of noise and lighting from waterfront development can be significantly reduced, if not altogether eliminated, by requiring adequate landscape buffering along the waterfront in new developments.

- 18. Where walkways and other development impact wetlands or wetland buffers, State and/or Federal permits may be required. A note to this effect shall be included on all subsequent plats and plans.
- 19. All walkways and paths in or adjacent to the required buffers shall be designed using

pervious surface material. Construction of the walkways shall be done in such a manner as to minimize disturbance within the buffers.

20. <u>Critical Area Commission</u>

21. All of the comments in the Critical Area Commission letter dated March 21, 2006 must be resolved or met prior to final plat approval (attached).

Historic District Commission

- 22. The applicant/land owner shall arrange for the HDC or its designee, to conduct an Archeological Assessment of the site prior to the issuance of any demolition, grading and or building permits. A note to this effect shall be included on the final plats.
- 23. Per the HDC memos of April 28, 2006 and May 5, 2006, the property was once site of a Navel Amphibious Training Base (ATB). Several buildings associated with the ATB have been included on the Maryland Inventory of Historic Properties (CT-800) Based the general policies set forth in the Solomons Master Plan (Chapter II.C.9, pg 44) and the HDC comments, staff recommends that those structures identified by the HDC (and any other historically significant structures subsequently found by the Archaeological Assessment), be preserved on-site and integrated into the proposed development. If this is not possible, staff recommends that the structures be made available to the HDC for relocation. The HDC also recommends that the applicant consider the benefits of placing (at a minimum) the Officer's Quarters into a Historic District.
- 24. Other archaeological sites have been located in the vicinity of this project. Consequently, it is possible that archaeological remains will be encountered during site preparation. The developer/contractor shall notify the HDC if, during construction, any archaeological artifacts are discovered on-site. A note reflecting this condition shall be added to the final plat.

<u>Public Works and State Highway Administration</u> - Road Standards and Stormwater Management <u>DPW, Engineering Bureau</u>

- 25. The applicant's surveyor shall certify on the plat that the locations of all subdivision street intersections and entrances meet or exceed AASHTO sight distance criteria for the posted speed of the road. An easement shall be provided on the final plat to accommodate the sight distance triangles.
- 26. The applicant's surveyor shall certify on the plat that an entrance location exists along the lot, be it on a public road or alley that meets or exceeds the sight distance requirements of the Calvert County Road Ordinance.
- 27. A shared driveway shall serve Lots 249 & 250. An easement shall be shown on the final plat to facilitate this. A deed of easement shall be submitted for recordation with final plats.
- 28. All subdivision street curves shall be designed to meet the minimum standards as set forth in the Calvert County Road Ordinance. Show horizontal curve data on the final plat.

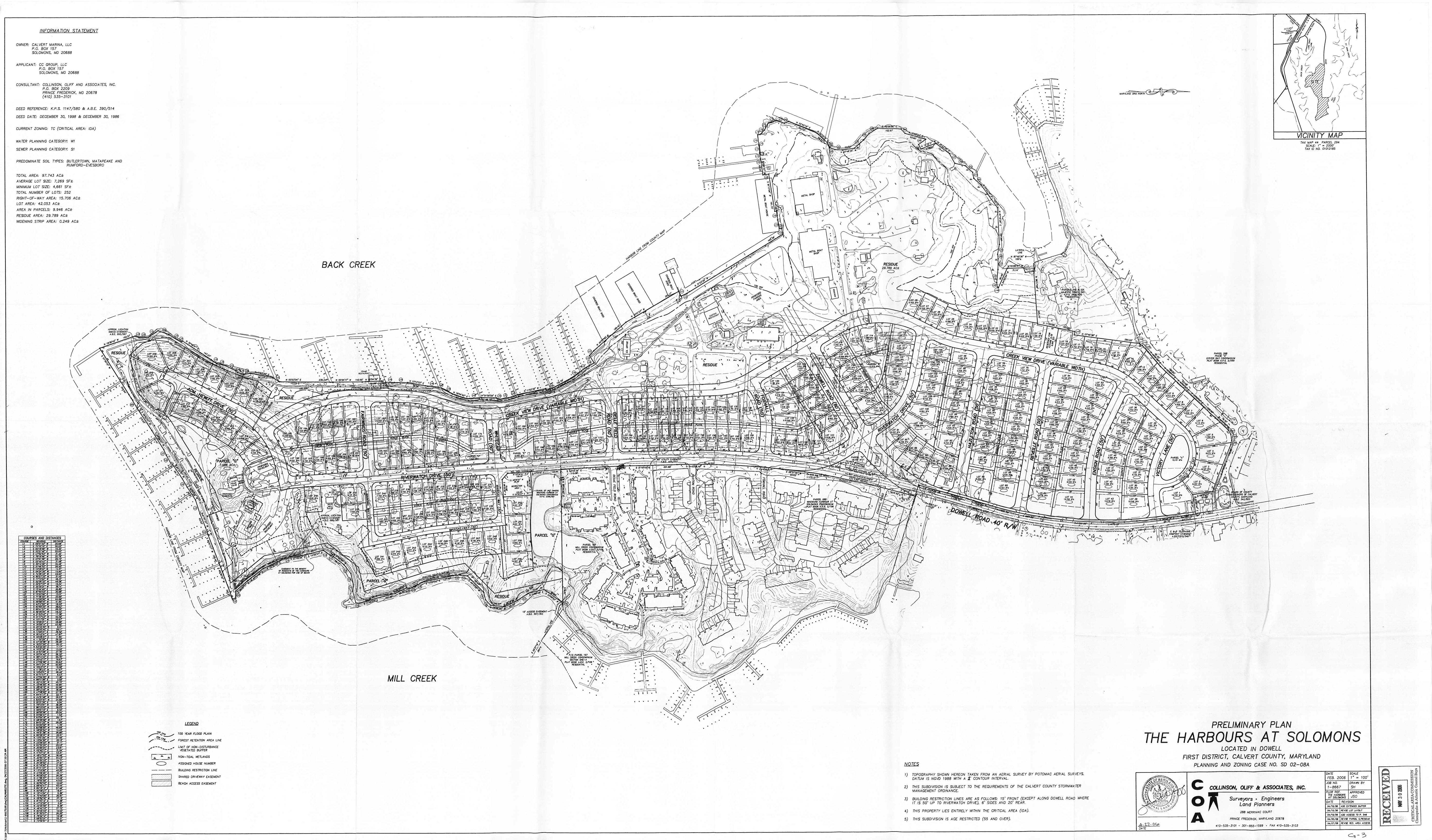
- 29. All lots shall be restricted to interior road access.
- 30. All driveways shall be a minimum of 60' from intersection fillets.
- 31. The subdivision streets shall be designed to meet the roadway standards of the current Calvert County Road Ordinance in effect at the time of road plan review.
- 32. Note on the plats that the proposed alleys shall be private, non-County owned and maintained and shall not be petitionable in perpetuity to the County for county ownership or for County maintenance. The developer shall be responsible for providing for the construction and the lot owners shall be responsible for maintenance including snow removal and repairs as well as other improvements and road service normally provided by the County.
- 33. A widening strip of sufficient width to provide for an ultimate 60' right-of-way along Dowell Road shall be dedicated to the County. The deeds for the widening strips shall be submitted for recordation with the recording package.
- 34. Landscaped islands within County rights-of-way must be deeded to the homeowner's association; the County will not be responsible for their maintenance. This Department must approve plantings within the islands in order to insure adequate sight distance is maintained.
- 35. The road around the divided portion of relocated Dowell Road shall have 18' wide lanes and be signed one-way.
- 36. Mainsail Way and Gerald Way may be reduced to a 30' public rights-of-ways provided that they are designated as "one-way" streets.
- 37. Final road plan approval from the Dept. of Public Works is required prior to final plat recordation.
- 38. Previous Transportation comments #4 & #5 from the memo dated March 3, 2006 no longer apply, per the revisions made to the preliminary plan as requested by this Department.
- 39. Dowell Road improvements to be done as part of this subdivision shall include the following:
 - The design and construction of Dowell Road from the southern property line of the pump station lot on the west side of Dowell Road to its terminus on the Harbours at Solomons (HAS) project.
 - Dowell Road Design Speed is to be 40 miles per hour (mph). Posted Speed is to be 30 mph.
 - The pavement structure as provided by URS shall be used for the HAS section of Dowell Road.
 - Curb and gutter for Dowell Road is to be 8" "A". All other streets in the HAS development can be 6" curb and gutter.
 - All Right-of-Way negotiations and acquisitions along both the County and the HAS sections of Dowell Road are to be provided by Calvert County. Plats in both the County and the HAS sections are to be provided by URS.
 - The HAS section of Dowell Road is to be a 36' section from Face of Curb (FOC) to face of Curb (18'southbound lane, 18' northbound lane, both lanes striped for 15'

lanes and a 3' space to FOC). The county section of Dowell Road is to be a 40' section FOC to FOC (15' southbound lane, 10' center turning lane, 15' northbound lane). A transition from the 40' three lane County Section to the 36' 2 lane HAS section is to occur in +/- 220' from the southern property line of the pump station on the west side of Dowell Road to the first side street to the west in the HAS development. This transition is to be with a thermo plastic pavement marking or other lane direction device.

- Sidewalk along the HAS section of Dowell Road is to have an 8' bike/sidewalk abutting the curb on both sides of Dowell road to allow a loop for the bike path with out having to cross Dowell Road.
- URS is to provide HAS with the drainage areas for the County Section of Dowell Road draining to the HAS section of Dowell Road. HAS is to investigate the possibility of managing the runoff in the HAS development Stormwater Management (SWM) structure.
- Show all storm drainage easements and points of discharge on the final plat. Note on the plat that no permanent structures are allowed within the storm drain easements.
- 40. Show all storm drainage easements and points of discharge on the final plat. Note on the final plat that no permanent structures are allowed within the stormdrain easements.
- 41. The stormwater management (SWM) study submitted is approved in concept. In accordance with Section 4.1(a) of the SWM Ordinance, the final design of the SWM facilities must be submitted prior to final approval of the subdivision in order that easements necessary for SWM may be shown on the plat.
- 42. In addition to the road improvements required by the County, a mitigation plan for road improvements in the area of Dowell Road, MD Rt. 765 and MD Rt. 2/4 shall be reviewed and accepted by SHA prior to final plat approval.

Water & Sewer

43. Construction plans to finalize the required design of water and sewerage infrastructure must be submitted prior to final approval of the subdivision in order that easements and pump station parcels necessary for community sewer and water may be shown on the plat. It appears that a minimum of two pumping stations will be necessary to accommodate this subdivision. The conveyance of such parcels shall be specified in the Public Works Agreement for the Water and Sewer.



Surveyors ~ Engineers ~ Land Planners 288 Merrimac Court

Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: LOCATION:

Sol Harbour Dowell Rd

JOB #:

Area 1 1-8667

NEW DEVELOPMENT

STEP 1:

Estimate parameters.

		Рге	- Dev.				Pos	t - Dev
A (Total area)		=	36.32	acres			36.32	acres
la:	Bldg.	=	0.25	acres			8.01	acres
	Pave	=	1.37	acres			6.23	acres
•	Alleys	=	0.00	acres			1.61	acres
	Conc.	=	1.84	acres			0.00	acres
	Sidewlk	=	0.00	acres	•		2.24	acres
•	Gravel	=	1.35	acres	•	•	0.00	acres
	<u>Drives</u>	=	0.00	acres			<u>1.82</u>	acres
	Total	=	4.81	acres		٠.	19.91	acres
I= (Ia Tot / A)		=	13%		•		55%	
Rv=0.05+0.00)9*I	=	0.17		٠.		0.55	
•								
C:		=	0.3	mg/l			0.3	mg/l

STEP 2: Calculate the pre-development load (L pre).

L pre

0.5 x A

=

18.2 lbs./year

STEP 3: Calculate the post-development load (L post).

L post

[(Rv x C x A x 8.16)]

=

48.9 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR

= L post - (0.8 * L pre)

=

34.3 lbs.

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED BMP	REMOVAL		FRACTION	~	L post	-	LOA		RR	
OPTION	%	X	D. A. SERVED	X	(STEP 3)	=	REMO\ lbs.	1	Balan Ibs.	
Multiple Pond	65%	X	100.0%	x .	48.9	=	31.8	lbs.	2.5	lbs.
Storm Filter	50%	X	3.0%	X	48.9	=	0.7	lbs.	1.8	lbs.
		X		X	**	=		lbs.	1.8	lbs.
		X		x		.=		lbs.	1.8	lbs.
		X		X		=		lbs.	1.8	lbs.
	,	X	·	X		=		lbs.	1.8	lbs.

Offset Required = 1.8 lbs.

Surveyors ~ Engineers ~ Land Planners 288 Merrimac Court

Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: LOCATION:

Sol: Harbour Dowell Rd Area 2

JOB #:

1-8667

RE-DEVELOPMENT

STEP 1:

Estimate parameters.

	<u>P</u>	re - Dev.	Post - Dev.
A (Total area)	=	5.08 acres	5.08 acres
la: Bldg.	=	0.01 acres	0.94 acres
Pave	=	0.46 acres	0.99 acres
Alleys	=	0.00 acres	0.20 acres
· Conc.	=	0.09 acres	0.00 acres
Sidew	ik = '	0.00 acres	0.43 acres
Grave	l. =	0.40 acres	0.00 acres
<u>Drives</u>	Ξ Ξ	0.00 acres	<u>0.17</u> <u>acres</u>
Total	=	0.96 acres	2.73 acres
		•	
I= (Ia Tot / A)	=	19%	54%
Rv=0.05+0.009*I	=	0.22	0.54
C:	=	0.3 mg/l	0.3 mg/l

STEP 2: Calculate the pre-development load (L pre).

L pre = $[(Rv \times C \times A \times 8.16)]$

2.7 lbs./year

STEP 3: Calculate the post-development load (L post).

L post = $[(Rv \times C \times A \times 8.16)]$

6.7 lbs./year

4.5 lbs.

STEP 4: Calculate the pollutant removal requirement (RR).

RR = L post - (0.8 * L pre)

.

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED BMP OPTION	REMOVAL EFFICIENCY %	x	PRACTION D. A. SERVED	X	L post (STEP 3)	=	LOA REMO'	VED	RF Balar Ibs	nçe
Surface Sand Filter	60%	х	100.0%	х	6.7	=	4.0	lbs.	0.5	lbs.
Storm Filter	50%	X .	7.3%	x	6.7	=	0.2	lbs.	0.2	lbs.
		X		x	•.	=	•	lbs.	0.2	lbs.
		X		. x		=		lbs.	0.2	lbs.
		X	.	. x		=		lbs.	0.2	lbs.
		X.		X		=		lbs.	0.2	lbs.

Offset Requried = 0.2 lbs.

^{**} If the LOAD REMOVED is equal or greater than the pollutant removal requirement (RR) calculated in STEP 4, then the on-site BMP options(s) comply with the Critical Area 10% Rule.

Surveyors ~ Engineers ~ Land Planners 288 Memmac Court

Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: LOCATION:

Sol: Harbour Dowell Rd Area 3

JOB #:

1-8667

RE-DEVELOPMENT

STEP 1:

Estimate parameters.

		<u>Pre</u>	- Dev.			Pos	st - Dev.
A (Total area	·)	=	10.76	acres		10.76	acres
la:	Bldg.	=	0.03	acres		1.53	acres
	Pave	=	0.04	acres		2.06	acres
	Alleys	=	0.00	acres		0.42	acres
	Conc.	=	0.58	acres		0.00	acres
	Sidewlk	=	0.00	acres		0.89	acres
	Gravel	=	1.25	acres		0.00	acres
•	<u>Drives</u>	Ξ	0.00	acres		<u>0.57</u>	acres
	Total	=	1.90	acres	-	5.47	acres
•							
I= (Ia Tot / A)		=	18%		•	51%	
Rv=0.05+0.0	09*1	=	0.21			0.51	
C:	•	=	0.3	mg/l		. 0.3	mg/l

STEP 2: Calculate the pre-development load (L pre).

L pre = $[(Rv \times C \times A \times 8.16)]$

5.5 lbs./year

STEP 3: Calculate the post-development load (L post).

L post = $[(Rv \times C \times A \times 8.16)]$

13.4 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR = L post - (0.8 * L pre)

9.0 lbs

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED	REMOVAL		FRACTION		L post		LOA	D	RR	
BMP OPTION	EFFICIENCY %	Х	D. A. SERVED	Х	(STEP 3)	=	REMO'	_	Baland lbs.	
Wet ED Pond	60%	X	100.0%	х	13.4	=	8.0	lbs.	1.0	lbs.
Storm Filter	50%	x	9.2%	x '	13.4	=	0.6	lbs.	0.3	lbs.
		X		х		=		lbs.	0.3	lbs.
		X		x		=		lbs.	0.3	lbs.
	·	X		X		=		. lbs.	0.3	lbs.
		X		. x		_	•	lbs.	0.3	lbs.

Offset Requried

= 0.3 lbs.

^{**} If the LOAD REMOVED is equal or greater than the pollutant removal requirement (RR) calculated in STEP 4, then the on-site BMP options(s) comply with the Critical Area 10% Rule.

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Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: LOCATION:

Sol Harbour Dowell Rd Area 4

JOB #:

Area 4 1-8667

RE-DEVELOPMENT

STEP 1:

Estimate parameters.

		<u>Рге</u>	- Dev.		Pos	st - Dev.
A (Total area))	=	6.15	acres	6.15	acres
la: ˌ	Bldg.	=	0.04	acres	1.31	acres
•	Pave	=	0.00	acres	0.84	acres
	Alleys	. =	0.00	acres	0.00	acres
•	Conc.	=	80.0	acres	0.00	acres
	Sidewlk	=	0.00	acres	0.26	acres
•	Gravel	=	.0.81	acres	0.00	acres
	<u>Drives</u>	Ξ	0.00	acres	0.22	acres
	Total	=	0.93	acres	2.63	acres
•						
I= (la Tot / A)		= '	15%		43%	
Rv=0.05+0.0	09*1	=	0:19		0.44	
•						
C:		= ,	0.3	mg/l	0.3	mg/l

STEP 2: Calculate the pre-development load (L pre).

L pre = $[(Rv \times C \times A \times 8.16)]$

=

2.9 lbs./year

STEP 3: Calculate the post-development load (L post).

L post = $[(Rv \times C \times A \times 8.16)]$

(CAN A G A / CA G. 10)

6.6 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR = L post - (0.8 * L pre)

=

4.3 lbs.

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED BMP OPTION	REMOVAL EFFICIENCY %	X	D. A. SERVED	х	L post (STEP 3)	=	LOAD REMOVED lbs.	RR Balan Ibs.	ce ·
Wet ED Pond	60%	X _.	100.0%	x .	6.6	=	4.0 lbs.	0.3	lbs.
·		X		x	·	=	lbs.	0.3	· lbs.
		x		X		=	lbs.	0.3	lbs.
		x		x		. =	lbs.	0.3	lbs.
		X		x		_ =	lbs	0.3	lbs.
		X		X		=	lbs	0.3	lbs.

Offset Requried

0.3 lbs.

^{**} If the LOAD REMOVED is equal or greater than the poliutant removal requirement (RR) calculated in STEP 4, then the on-site BMP options(s) comply with the Critical Area 10% Rule.

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Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: LOCATION: Sol Harbour Dowell Rd Area 5 1-8667

JOB #:

RE-DEVELOPMENT

STEP 1:

Estimate parameters.

	•	<u>Pre</u>	- Dev.		Pos	st - Dev.
A (Total area))	=	4.62	acres	4.62	acres
la:	Bldg.	=	0.03	acres	0.04	acres
	Pave	= .	0.00	acres	1.07	acres
	Alleys	=	0.00	acres	0.00	acres
	Conc.	=	0.06	acres	0.00	acres
	Sidewlk	=	0.00	acres	0.16	acres
	Gravel	=	0.85	acres	0.00	acres
	<u>Drives</u>	Ξ΄	0.00	acres	0.00	acres
•	Total	=	0.94	acres	1.27	acres
I= (Ia Tot / A)		=	20%		27%	
Rv=0.05+0.00	09*1	=	0.23		0.29	
C:		=	0.3	mg/l	0.3	mg/l

STEP 2: Calculate the pre-development load (L pre).

· L pre [(Rv \times C \times A \times 8.16)]

.2.6 lbs./year

STEP 3: Calculate the post-development load (L post).

L post [(Rv x C x A x 8.16)]

3.3 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR L post - (0.8 * L pre)

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED BMP OPTION	REMOVAL EFFICIENCY %	x	D. A. SERVED	х	L post (STEP 3)	=	LOAD REMOVE lbs.	D	RR Balan Ibs.	се
Infiltration Trench	65%	х	45.0%	х	3.3	=	1.0	lbs.	0.2	lbs.
		X	·	X		=		lbs.	0.2	lbs.
		X]	x		=		lbs.	0.2	lbs.
		X		x .		=	•	lbs.	0.2	lbs.
	[]	x		x	+ # #	=	·	lbs.	0.2	lbs.
		Х	ŀ	· x		=		lbs.	0.2	lbs.

Offset Requiled 0.2 lbs.

^{**} If the LOAD REMOVED is equal or greater than the pollutant removal requirement (RR) calculated in STEP 4, then the on-site BMP options(s) comply with the Critical Area 10% Rule.

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Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: LOCATION: Sol Harbour Dowell Rd

JOB #:

Area 6 1-8667

NEW DEVELOPMENT

STEP 1:

Estimate parameters.

•		Pre	<u> - Dev.</u>		Pos	st - Dev.
A (Total area)	ŀ	=	10.66	acres	10.66	acres
la:	Bldg.	=	0.03	acres	. 2.15	acres
	Pave	=	0.00	acres	0.91	acres
·	Alleys	=	0.00	acres	0.20	acres
	Conc.	=	0.32	acres	0.00	acres
•	Sidewlk	=	0.00	acres	0.27	acres
	Gravel	=	0.14	acres	0.00	acres
	<u>Drives</u>	Ξ	0.00	acres	<u>0.23</u>	acres
	Total	= .	0.49	acres	3.76	acres
I= (Ia Tot / A)		= ,	5%		35%	
Rv=0.05+0.0	09*1	= '	0.10		0.37	
C :	-	=	0.3	mg/l	0.3	mg/l

STEP 2: Calculate the pre-development load (L pre).

L pre $0.5 \times A$

5.3 lbs./year

STEP 3: Calculate the post-development load (L post).

L post $[(Rv \times C \times A \times 8.16)]$

9.7 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR L post - (0.8 * L pre)

5.5 lbs.

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED BMP OPTION	REMOVAL EFFICIENCY %	X	FRACTION D. A. SERVED	x	L post (STEP 3)	. =	LOA REMO\ lbs.	/ED	RR Balance Ibs.	
Bio Retention Area	50%	X	100.0%	х	9.7	=	4.9	lbs.	0.7	lbs.
Storm Filter	50%	X	1.9%	x	9.7	=	0.1	lbs.	0.6	· lbs.
		X		х		=		lbs.	0.6	lbs.
		X		x		=		lbs.	0.6	lbs.
		x		x		=	• .	lbs.	0.6	lbs.
		X		Χ.		=		ibs.	0.6	lbs.

Offset Requried

^{**} If the LOAD REMOVED is equal or greater than the pollutant removal requirement (RR) calculated in STEP 4, then the on-site BMP options(s) comply with the Critical Area 10% Rule.

Surveyors ~ Engineers ~ Land Planners 288 Merrimac Court

Prince Frederick, Maryland 20678

IDA Zone: 20% Rule Calculations

PROJECT: LOCATION:

Sol Harbour Dowell Rd

JOB #:

Area 7 1-8667

RE-DEVELOPMENT

STEP 1:

Estimate parameters.

		<u>Pre</u>	- Dev.		Pos	st - Dev.
A (Total area)	•	=	8.87	acres	8.87	acres
la:	Bldg.	=	0.21	acres	0.17	acres
	Pave	=	0.00	acres	1.97	acres ·
	Alleys	=	0.00	acres	0.00	acres
	Conc.	=	.0.28	acres	0.00	acres
	Sidewlk	=	0.00	acres	0.00	acres
	Gravel	=	1.86	acres	0.00	acres
	<u>Drives</u>	Ξ.	0.00	acres	0.00	<u>acres</u>
	Total	=	2.35	acres	2.14	acres
I= (Ia Tot / A)		=	26%	·	24%	
Rv=0.05+0.0	09*1	=	0.28		0.27	
,						
C:		=	0.3	mg/l	0.3	mg/l.

STEP 2: Calculate the pre-development load (L pre).

L pre = $[(Rv \times C \times A \times 8.16)]$

6.1 lbs./year

STEP 3: Calculate the post-development load (L post).

L post = $[(Rv \times C \times A \times 8.16)]$

5.9 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR = L post - (0.8 * L pre)

1.0 lbs

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED BMP OPTION	REMOVAL EFFICIENCY %	X	FRACTION D. A. SERVED	х	L post (STEP 3)	= .	LOAI REMO\ Ibs.		RR Balan Ibs.	се .
Bioretention Area	50%	X	15.0%	х	5.9	=	0.4	lbs.	0.6	lbs.
		X		· X	•	=		lbs.	0.6	lbs.
		X		X		=		lbs.	0.6	lbs.
		X		x		=		lbs.	0.6	lbs.
		X		X ·	e e	=		lbs.	0.6	lbs.
		X		X		=		lbs.	0.6	lbs.

Offset Required = 0.6 lbs.

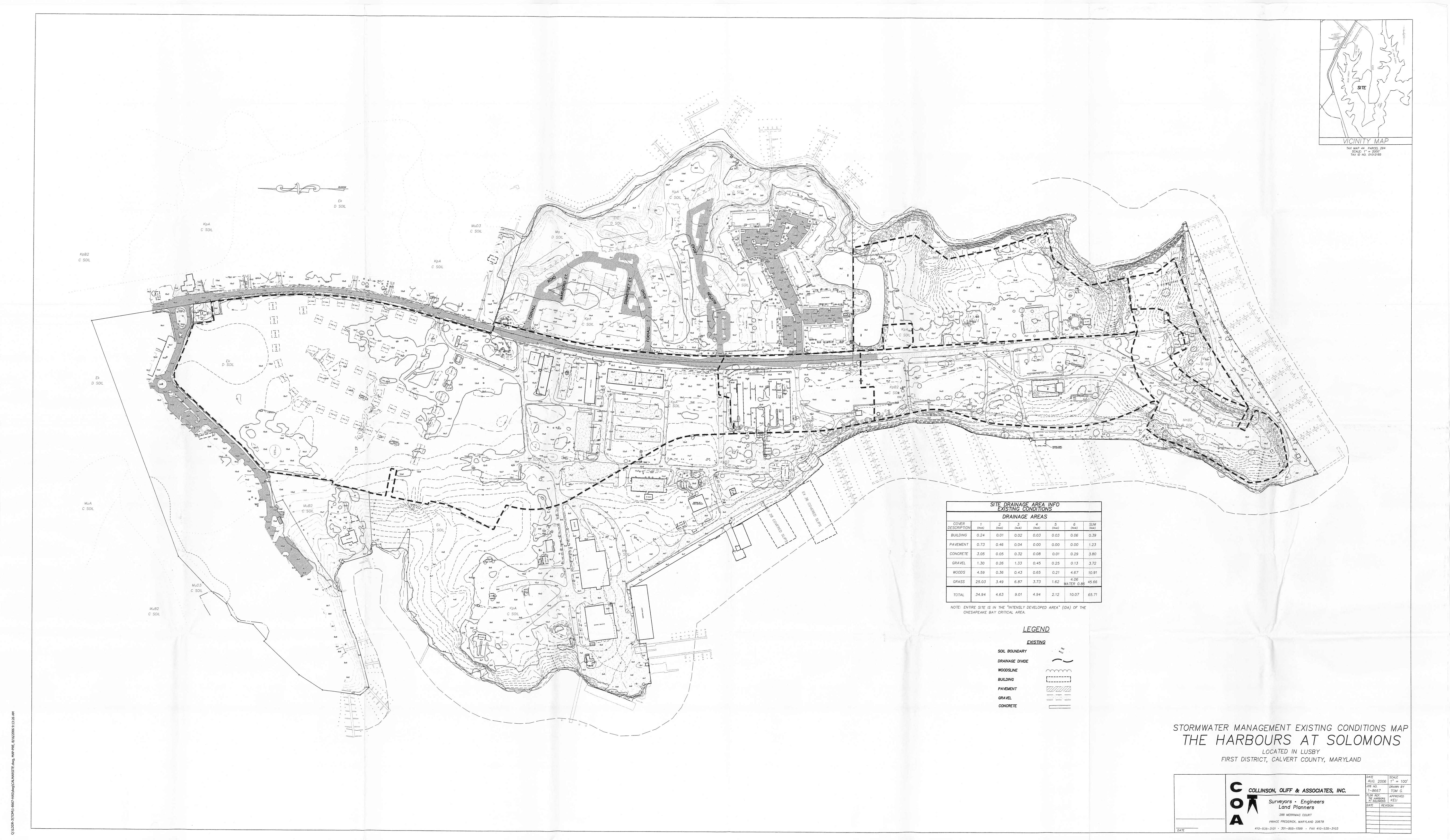
	Keystone Phospho	rus Rem	noval Rates
Code	BMP List	TP%	Comments
P-1	Micropool ED	40%	
P-2	Wet Pond	50%	
P-3	Wet ED Pond	60%	
P-4	Multiple Pond	65%	
P-5	Pocket Pond	50%	
W-1	Shallow Wetland	40%	
W-2	ED Wetland	40%	
W-3	Pond / Wetland	55%	
W-4	Pocket Wetland	40%	
1-1	Infiltration Trench	65%	
1-2	Infiltration Basin	65%	
F-1	Surface Sand Filter	50%	
F-2	Underground Sand Filter	50%	Storm Filter
F-3	Perimeter Sand Filter	50%	
F-4	Organic Filter	50%	
F-5	Pocket Sand Filter	40%	
F-6	Bioretention	50%	
0-1	Dry Swale	65%	
O-2	Wet Swale	40%	

PCL XL error

Error: InsufficientMemory

Operator: PaintPath

Position: 88830



Stormwater Management Study

Of

The Harbours at Solomons

For

CC Group

By

Collinson Oliff & Associates

P.O. Box 2209 Prince Frederick Maryland, 20678 410-535-3101 OR 301-855-1599

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CRITICAL AREA COMMISSION

KEU February 9, 2006 Auth. 1-8667

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· · .			
	<u>Appendices</u>		
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Appendix B	BMP Code		

Introduction

The following is a stormwater management study is for The Harbours at Solomons Property. The project is located at the end of Dowell Road on a peninsula bordered by Back Creek to the west and Mill Creek to the east, in the Solomons Town Center, the first election District of Calvert County, Maryland.

The property study area contains +/- 82.46 acres. The north half of the property is wooded in the existing condition. The southern portion of the site is currently utilized by the Calvert Marina, with the exception of a +/- 10.66 acre section on the Mill Creek side of the site. The entire Calvert Marina Property was once a United States Navy base several years ago. The site topography slopes primarily from a ridgeline that runs through the center of the property from north to south. For this study, seven drainage areas were considered for the property. The areas were segmented as shown on the drainage area maps due to existing ground covers and also to account for the projected developed discharge points of the proposed storm drainage system. For areas one and six the computations were performed for New Development (existing impervious areas less than 15%) because of no development existing in those areas. For areas two thru five and seven, because of the development in conjunction with Calvert Marina, the drainage areas were computed as Redevelopment Areas (existing impervious areas greater than 15%). The Calvert County Soil Survey indicates the site is primarily "C and D" type soil with isolated "B" type soils. (See drainage area map for soil types in Appendix B).

The development planned for the property is to consist of the subdivision of 252 single-family lots. All lots will be serviced with public water and sewer, and a closed storm drainage system. The property lies within the Intensely Developed Area (IDA) of the critical area. Therefore, in accordance with the 2000 Stormwater Design Manual Volumes I & II the Recharge Volume (Rev), Channel Protection Volume (Cpv), Over the Bank Flood Volume (Qp), and Extreme Flood Volume (Qr) are not required because of direct discharge to tidal waters.

The following report will provide computations for the pollutant removal required, the planned Best Management Practice (BMP) for the pollutant removal, analysis of possible credits for the proposed development, and the Water Quality Volume required for the BMP volume design.

Pollutant Removal Requirement Calculation & BMP Selection

Surveyors ~ Engineers ~ Land Planners 288 Merrimac Court

Prince Frederick, Maryland 20678

IDA Zone: 10% Rule Calculations

PROJECT: LOCATION:

Sol Harbour Dowell Rd Area 1

Area 1 1-8667

NEW DEVELOPMENT

STEP 1:

JOB #:

Estimate parameters.

		Рге	<u>- Dev.</u>		Ps	st - Dev
A (Total area)		=	36.32	acres :	36.32	acres
la:	Bldg.	=	0.25	acres	8.01	acres
	Pave	=	1.37	acres	6.23	acres
•	Alleys	=	0.00	acres	1.61	acres
	Conc.	=	1.84	acres	. 0.00	acres
	Sidewlk	=	0.00	acres	. 2.24	acres
:	Gravel	=	1.35	acres	0.00	acres
		Ξ	0.00	acres	<u>1.82</u>	acres
	Total	=	4.81	acres	19.91	acres
			-			
I= (Ia Tot / A)		=	13%		55%	6
Rv=0.05+0.00)9*I	=	0.17		0.55	j
C :		=	0.3	mg/l	0.:	3 mg/l

STEP 2: Calculate the pre-development load (L pre).

L pre = $0.5 \times A$

18.2 lbs./year

STEP 3: Calculate the post-development load (L post).

L post = $[(Rv \times C \times A \times 8.16)]$

--

48.9 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR = L post - (0.9 * L pre)

32,5 lbs.

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED BMP	REMOVAL EFFICIENCY	х	FRACTION D. A.	х	L post	=	LOA REMO\		RR Balan	
OPTION	%		SERVED		(STEP 3)		lbs.		lbs.	
Multiple Pond	65%	X	100.0%	X	48.9	=	31.8	lbs.	0.7	lbs.
Storm Filter	50%	X .	3.0%	X	48.9	. =	0.7	lbs.	0.0	lbs.
		X -		×		=		lbs.	0.0	lbs.
}		X		X		=		lbs.	0.0	lbs.
		X		· X		=.		lbs.	0.0	lbs.
		X	<u> </u>	×		=		lbs.	0.0	lbs.

Offset Requried

= (0.0) lbs.

Surveyors - Engineers - Land Planners 288 Merrimac Court

Prince Frederick, Maryland 20678

IDA Zone: 10% Rule Calculations

PROJECT: LOCATION: Sol Harbour Dowell Rd

JOB#:

Area 2 1-8667

RE-DEVELOPMENT

STEP 1:

Estimate parameters.

·	Pr	<u>e - Dev.</u>	Post - Dev.
A (Total area)	= "	5.08 acres	5.08 acres
la: Bldg.	=	0.01 acres	0.94 acres
Pave	=	0.46 acres	0.99 acres
Alleys	= :	0.00 acres	0.20 acres
Conc.	=	0.09 acres	0.00 acres
Sidew	1k =	0.00 acres	0.43 acres
Grave	=	0.40 acres	0.00 acres
<u>Drives</u>	₹ =	0.00 <u>acres</u>	0.17 acres
Total	=	0.96 acres	2.73 acres
I= (Ia Tot / A)	=	19%	54%
Rv=0.05+0.009*I	=	0.22	. 0.54
C:	=	0.3 mg/l	0.3 mg/l

STEP 2: Calculate the pre-development load (L pre).

 $[(Rv \times C \times A \times 8.16)]$

2.7 lbs./year

STEP 3: Calculate the post-development load (L post).

L post $[(Rv \times C \times A \times 8.16)]$

6.7 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR L post - (0.9 * L pre)

4.3 lbs.

STEP 5: Select BMP options using the screening tools and list thern below. Then calculate the load removal for each option.

SELECTED	REMOVAL		FRACTION		L post	ТП	LOA	D	RR	
BMP OPTION	EFFICIENCY %	X	D. A. SERVED	X	(STEP 3)	=	REMO'		Balan lbs.	
Surface Sand Filter	60%	X	100.0%	х	6.7	=	4.0	lbs.	0.3	lbs.
Storm Filter	50%	X	7.3%	X	6.7	=	0.2	lbs.	0.0	lbs.
	·	X		X		=		lbs.	0.0	lbs.
		X		X.	-	=		lbs.	0.0	lbs.
		X		X		=		lbs.	0.0,	lbs.
		Х	;;	X		=		lbs.	0.0	lbs.

Offset Requried

0.0 lbs.

Surveyors - Engineers - Land Planners 288 Merrimac Court

Prince Frederick, Maryland 20678

IDA Zone: 10% Rule Calculations

PROJECT: LOCATION: Sol Harbour Dowell Rd Area 3 1-8667

RE-DEVELOPMENT

STEP 1:

JOB #:

Estimate parameters.

	E	re - Dev.	Post - Dev.
A (Total area)	=	10.76 acres	10.76 acres
la: Bidg.	= '	0.03 acres	1.53 acres
Pave	=	0.04 acres	2.06 acres
Alleys	: =	0.00 acres	0.42 acres
· Conc.	=	0.58 acres	0.00 acres
Sidew	1k =	0.00 acres.	0.89 acres
Grave	=	1.25 acres	0.00 acres
<u>Drives</u>	<u> </u>	0.00 acres	<u>0.57</u> <u>acres</u>
Total	=	1.90 acres	5.47 acres
I= (Ia Tot / A)	=	18%	51%
Rv=0.05+0.009*I	=	0.21	0.51
_C:	=	0.3 mg/l	0.3 mg/l

STEP 2: Calculate the pre-development load (L pre).

L pre [(Rv \times C \times A \times 8.16)]

5.5 lbs./year

STEP 3: Calculate the post-development load (L post).

L post $[(Rv \times C \times A \times 8.16)]$

13.4 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR L post - (0.9 * L pre)

8.5 lbs.

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED BMP OPTION	REMOVAL EFFICIENCY %	x	PRACTION D. A. SERVED	х	L post . (STEP 3)	=	LOAD REMOVEI	D	RR Baland Ibs.	е
Wet ED Pond	60%	X	100.0%	Х	13.4	=	8.0	lbs.	0.5	lbs.
Storm Filter	50%	X	9.2%	X	13.4	=	0.6	lbs.	-0.2	lbs.
		X		X		=	. 1	lbs.	-0.2	lbs.
		X		X		=		lbs.	-0.2	lbs.
		X		X.		=	· .	lbs.	-0.2	lbs.
		X		Х		=		bs.	-0.2	lbs.

Offset Required (0.2) lbs.

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Prince Frederick, Maryland 20678

IDA Zone: 10% Rule Calculations

PROJECT: LOCATION: Sol Harbour Dowell Rd Area 4 1-8667

JOB #:

RE-DEVELOPMENT

STEP 1:

Estimate parameters.

,		Pre	<u>- Dev.</u>		Pos	st - Dev.
A (Total area)	1	= '	6.15	acres'	6.15	acres
la:	Bldg.	=	0.04	acres	1.31	acres
	Pave	=	0.00	acres	0.84	acres
	Alleys	=	0.00	acres	0.00	acres
	Conc.	=	0.08	acres	0.00	acres
	Sidewlk	=	0.00	acres	0.26	acres
	Gravel	=	0.81	acres	0.00	acres
	<u>Drives</u>	Ξ	<u>0.00</u>	acres	0.22	<u>acres</u>
	Total	=	0.93	acres	2.63	acres
		٠.		:		
I= (Ia Tot / A)		=	15%		43%	
Rv=0.05+0.00	09*I	=	0.19		0.44	
				•		
C: .		= .	0.3	mg/l	0.3	mg/l

STEP 2: Calculate the pre-development load (L pre).

L pre [(Rv x C x A x 8.16)]

2.9 lbs./year

STEP 3: Calculate the post-development load (L post).

L post $[(Rv \times C \times A \times 8.16)]$

6.6 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR L post - (0.9 * L pre)

4.0 lbs.

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED BMP OPTION	REMOVAL EFFICIENCY %	X	FRACTION D. A. SERVED	X	L post (STEP 3)	=	LOAD REMOVE Ibs.	D	RR Balan Ibs.	се
Wet ED Pond	60%	Χ	100.0%	X	6.6	=	4.0	lbs.	0.0	lbs.
·		X		· X	·	=		lbs.	0.0	lbs.
	·	X		X		=		lbs.	0.0	lbs.
		X		Х		=		lbs.	0.0	lbs.
		X		X .		=		lbs.	0.0	lbs.
		Х]	х		=	! _•	lbs.	0.0	lbs.

Offset Requried

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Prince Frederick, Maryland 20678

IDA Zone: 10% Rule Calculations

PROJECT: LOCATION: Sol Harbour Dowell Rd 1-8667

Area 5

JOB #:

RE-DEVELOPMENT

STEP 1:

Estimate parameters.

		<u>Pre -</u>	Dev.		Pos	st - Dev.
A (Total area)		=	4.62	acres	4.62	acres
la:	Bldg.	=	0.03	acres	0.04	acres
•	Pave	=	0.00	acres	1.07	acres
	Alleys	=	0.00	acres	0.00	acres
	Conc.	=	0.06	acres	0.00	acres
	Sidewlk	=	0.00	acres	0.16	acres
	Gravel	= ·	0.85	acres	0.00	acres
	<u>Drives</u>	Ξ.	0.00	acres	0.00	acres
	Total	=	0.94	acres	1.27	acres
				٠.		•
I= (Ia Tot / A)		= .	20%	•	27%	
Rv=0.05+0.00)9 * I	= '	0.23	•	0.29	
C:		=	0.3	mg/l	0.3	mg/l

STEP 2: Calculate the pre-development load (L pre).

[(Rv x C x A x 8.16)] . L pre

2.6 lbs./year

STEP 3: Calculate the post-development load (L post).

L post $[(Rv \times C \times A \times 8.16)]$

3.3 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR L post - (0.9 * L pre)

#.0 lbs.

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED	REMOVAL		FRACTION		L post		LOAD	_	RR	
BMP OPTION	EFFICIENCY %	Х	D. A. SERVED	X	(STEP 3)	=	REMOVE lbs.	D	Balan Ibs.	
Infiltration Trench	65%	X.	45.0%	Х	3.3	=	1.0	lbs.	0.0	lbs.
	 	· X		X		=		lbs.	0.0	lbs.
·		X		X	, .	=		lbs.	0.0	lbs.
		X		X		=		lbs.	0.0	lbs.
		X		X		=	•	lbs.	0.0	lbs.
		X		x		=	• .	lbs.	0.0	lbs.

Offset Requried

0,0 lbs.

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Prince Frederick, Maryland 20678

IDA Zone: 10% Rule Calculations

PROJECT: LOCATION:

Sol Harbour Dowell Rd Area 6 1-8667

JOB #:

NEW DEVELOPMENT

STEP 1:

Estimate parameters.

		Pro	<u>a - Dey.</u>		<u>Po</u> :	<u>st - Dev.</u>
A (Total area))	=	10.66	acres	10.66	acres
la:	Bldg.	=	0.03	acres	2.15	acres
•	Pave	=	0.00	acres	0.91	acres
	Alleys	=	0.00	acres	0.20	acres
	Conc.	=	0.32	acres	0.00	acres
	Sidewlk	=	0.00	acres	0.27	acres
	Gravel	=	0.14	acres	0.00	acres
	<u>Drives</u>	Ξ		acres	0.23	<u>acres</u>
÷	Total	=	0.49	acres	3.76	acres
I= (Ia Tot / A)	•	=	5%		35%	
Rv=0.05+0.0	09*1	=	0.10		0.37	
C : .		=	0.3	mg/l	0.3	mg/l

STEP 2: Calculate the pre-development load (L pre).

L pre = 0.5 x A

5.3 lbs./year

STEP 3: Calculate the post-development load (L post).

L post = [(Rv x C x A x 8.16)]

9.7 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR = L post - (0.9 * L pre)

=

4.9 lbs.

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED BMP OPTION	REMOVAL EFFICIENCY %	X	FRACTION D. A. SERVED	х	L post (STEP 3)	=	LOA REMO\ lbs.	/ED	RR Balan Ibs	се
Bio Retention Area	50%	Х	100.0%	Х	9.7	=	4.9	lbs.	0.1	lbs.
Storm Filter	50%	x	1.9%	X	9.7	=	0.1	lbs.	0.0	lbs.
		· x		x		· =		lbs.	0.0	lbs.
	·	X		x	·	=		lbs.	0.0	lbs.
		X		X		=		lbs.	0.0	lbs.
		х		х		=		lbs.	0.0	lbs.

Offset Requried

: (0.0)

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Prince Frederick, Maryland 20678

IDA Zone: 10% Rule Calculations

PROJECT: LOCATION: Sol Harbour Dowell Rd

Area 7

JOB #:

1-8667

RE-DEVELOPMENT

STEP 1:

Estimate parameters.

•		<u>Pre -</u>	Dev.		Po:	st - Dev.
A (Total area)		=	8.87	acres	8.87	acres
la:	Bldg.	= '	0.21	acres	0.17	acres
	Pave	=	0.00	acres	1.97	acres
	Alleys	=	0.00	acres	0.00	acres
	Conc.	=	0.28	acres	0.00	acres
	Sidewlk	=	0.00	acres	0.00	acres
	Gravel	= .	1.86	acres	0.00	acres
	<u>Drives</u>	Ξ.΄	0.00	acres	0.00	acres-
	Total	= ' .	2.35	acres	2.14	acres
				,•		
I= (Ia Tot / A)		=	26%		24%	
Rv=0.05+0.00	9*1	=	0.28		0.27	
C:		=	0.3	ma/l	0.3	ma/l

STEP 2: Calculate the pre-development load (L pre).

L pre [(Rv x C x A x 8.16)]

6.1 lbs./year

STEP 3: Calculate the post-development load (L post).

L post $[(Rv \times C \times A \times 8.16)]$

5.9 lbs./year

STEP 4: Calculate the pollutant removal requirement (RR).

RR L post - (0.9 * L pre)

0.4 lbs.

STEP 5: Select BMP options using the screening tools and list them below. Then calculate the load removal for each option.

SELECTED BMP OPTION	REMOVAL EFFICIENCY %		FRACTION D. A. SERVED	х	L post (STEP 3)	=	LOAI REMOV Ibs.		RR Balan Ibs.	се
Bigretention Area	50%	X	15.0%	х	5.9	=	0.4	lbs.	0.0	lbs.
		X		X		=		ibs.	0.0	lbs.
		X		X		=		lbs.	0.0	lbs.
		X		x		=		lbs.	0.0	lbs.
		X		x		=		lbs.	0.0	lbs.
		X		X		=		lbs.	0.0	lbs.

Offset Requried

Analysis of Possible Credits (No credits utilized)

Water Quality Volume (WQv) Calculations for BMP Sizing

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P.O. Box 2209 Prince Frederick, Maryland 20678

410-535-3101: 301-855-1599: Fax 410-535-3103

Water Quality Volume Computation Sheet

Site:			Solomons H	arbour
Location:			Dowell Re	
COA Authorization #:			1-8667	
Date:		:	February 9,	2006
Designer:			KEU	
For:		: .	CC Grou	up
			**-	
Drainage Area :			1	
Nater Quality Volume -	WQv			
Drainage Area(A):	36.32	Acres		
Impervious Area (I) :	19.91	Acres		
Precipitation (P):	1.00	inches		
	· · · · · · · · · · · · · · · · · · ·			
	% Ir	npervious cover	= I/A=	54.82
D., =0.05+0.000(I) =1	0.54	· • • • • • • • • • • • • • • • • • • •		
Rv =0.05+0.009(I) =	0.54			
	WQ	v (Ac-ft) = (P)(Rv	/)(A)/12 =	1.64
Sites w/ < 15% Imp	cover - WC	v (Acre-ft) = (0.2)	2)(A)/12 =	0.61
			Acre-ft) =	1.64

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Site:	Solomons Harbour				
Location:	Dowell Road				
COA Authorization #:			1-8667	 	
Date:	February 9, 2006				
Designer:			KEU		
For:	CC Group				
Drainage Area :		<u> </u>	2		
Dramago Area .					
Vater Quality Volume - 1	NQv				
Drainage Area(A):	5.08	Acres			
Impervious Area (I):	2.73	Acres			
Precipitation (P):	1.00	inches		· ·	
	<u>% I</u>	mpervious cover	= I/A = 53.74		
Rv =0.05+0.009(I) =	0.53				
	\\/\	v (Ac-ft) = (P)(R	/)(A)/12 = 0.23		
	VV (2	(v (AU-11) - (P)(K)	()(A)/12 - [U.23		
Sites w/ < 15% Imp	COVER - M/C	$\Delta V (\Delta cro-ft) = (0.9)$	2)(A)/12 = 0.08		

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410-535-3101: 301-855-1599: Fax 410-535-3103

Site:			Solomone L	Jarhour	
Location:	Solomons Harbour				
			Dowell F		· · · · · · · · · · · · · · · · · · ·
COA Authorization #:	····		1-866		
Date:	•		February 9	, 2006	
Designer:		·	KEU		. :
For:	•		CC Gro	up	
Drainage Area :			3		
	•				
Vater Quality Volume -	WQv				
Drainage Area(A):	10.76	Acres		:	
Impervious Area (I):	5.47	Acres			•
Precipitation (P):	1.00	inches			
·	% lm	pervious cove	r = I/A =	50.84	·
D 0.05.0.000(t)		·	·		· · · · · · · · · · · · · · · · · · ·
Rv =0.05+0.009(I) =	0.51		· 	<u> </u>	
	WOV	(Ac-ft) = (P)(F	2v\/A\/12 = I	0.46	
Sites w/ < 15% Im	COVER - WO	$\sqrt{\Lambda c^{-1} t} = (F)(F)$	2)(4)/12 =	0.18	
Olico.W/ > 10 /0 I/II	J. COVEL - VVQ		(Acre-ft) =	0.46	
		WQV	(ACIE-11) = [U.40	

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Site:	Solomons Harbour				
Location:	Dowell Road				
COA Authorization #:			1-8667	7	
Date:			February 9	, 2006	
Designer:			KEU		
For:			CC Gro	up	
Drainage Area:			4		
	•				
Water Quality Volume - V	VQv				
Drainage Area(A):	6.15	Acres			
Impervious Area (I):	2.63	Acres			
Precipitation (P):	1.00	inches			
			-		,
	% Ir	npervious cove	er = I/A =	42.76	
	•			·	
Rv =0.05+0.009(I) =	0.43		•	<u> </u>	
·	WO	v (A o ft) = (D)/5	Dv/(A)/42 = [0.22	
Sitos w/ < 150/ Imp		v (Ac-ft) = (P)(F			
Sites w/ < 15% Imp	. cover - vvc			0.10	
<u> </u>		WQV	(Acre-ft) =	0.22	

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		÷ 1			-	
Site:	Solomons Harbour					
Location:	Dowell Road					
COA Authorization #:			1-8667			· · ·
Date:			February 9,	2006	•	
Designer:			KEU		· · ·	
For:			CC Gro	up		
Drainage Area :			5			
					*	
Water Quality Volume -	WOV	-				
······································	·					
Drainage Area(A):	4.62	Acres				
Impervious Area (I):	1.27	Acres				
Precipitation (P):	1.00	inches				
•				;		
	% Ir	npervious cove	r = I/A=	27.49		
Rv =0.05+0.009(I) =	0.30				·	
		(4 (4)				
Cites 4 450/ 1	WQ	V (Ac-ft) = (P)(R	(v)(A)/12 =	0.11		
Sites w/ < 15% Im	p. cover - WC			0.08		
		WQv	(Acre-ft) =	0.11		

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410-535-3101: 301-855-1599: Fax 410-535-3103

Site:	Solomons Harbour				
Location:	Dowell Road				
COA Authorization #:			1-8667		
Date:			February 9, 2006		
Designer:			KEU		
For:			CC Group		
			• • • • • • • • • • • • • • • • • • •		
Drainage Area :			6		
Water Quality Volume -	MOA	Τ			
Drainage Area(A):	10.66	Acres			
Impervious Area (I):	3.76	Acres			
Precipitation (P):	1.00	inches			
	% In	npervious cove	er = I/A = 35.27		
Rv =0.05+0.009(I) =	0.37				
		/ (Ac-ft) = (P)(I			
Sites w/ < 15% Imp	o. cover - WQ				
WQv (Acre-ft) = 0.33					

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410-535-3101: 301-855-1599: Fax 410-535-3103

Site:	Solomons Harbour					
Location:		Dowell Road				
COA Authorization #:			1-860	67		
Date:			February	9, 2006		
Designer:		KEU				
For:			CC Gr	roup		
Drainage Area :			. 7	·		
			*			
Water Quality Volume -	WQv					
Drainage Area(A):	8.87	Acres				
Impervious Area (I):	2.14	Acres				
Precipitation (P) :	1.00	inches				
	% Im	pervious cove	r = I/A =	24.13		
Rv =0.05+0.009(I) =	0.27	·				
	. \\(\O\)	(A o ft) = (D)/F	DV/(A)/40 = 1	0.20		
Sitos w/ < 15% Im		(Ac-ft) = (P)(F		0.20		
Siles W/ > 1376 III	Sites w/ < 15% Imp. cover - WQv (Acre-ft) = (0.2)(A)/12 = 0.15					
	WQv (Acre-ft) = 0.20					

Conclusion

This Stormwater Management Study was conducted in accordance with the <u>2000 Maryland Stormwater Design Manual Volumes I & II</u> (MSDM), and the <u>Calvert County Stormwater Management Ordinance</u>, dated July 2001. The steps of this study provide computations for the pollutant removal required, the planned Best Management Practice (BMP) for the pollutant removal, analysis of possible credits for the proposed development, and the Water Quality Volume required for the BMP volume design.

With the runoff from the property discharging into tidal waters Rev, Cpv, Qp, and Qr Stormwater management is not required in accordance with the <u>Calvert County Stormwater Management Ordinance</u>, and the <u>2000 Maryland Stormwater Design Manual Volumes I & II.</u>

No storm water credits were available for this development.

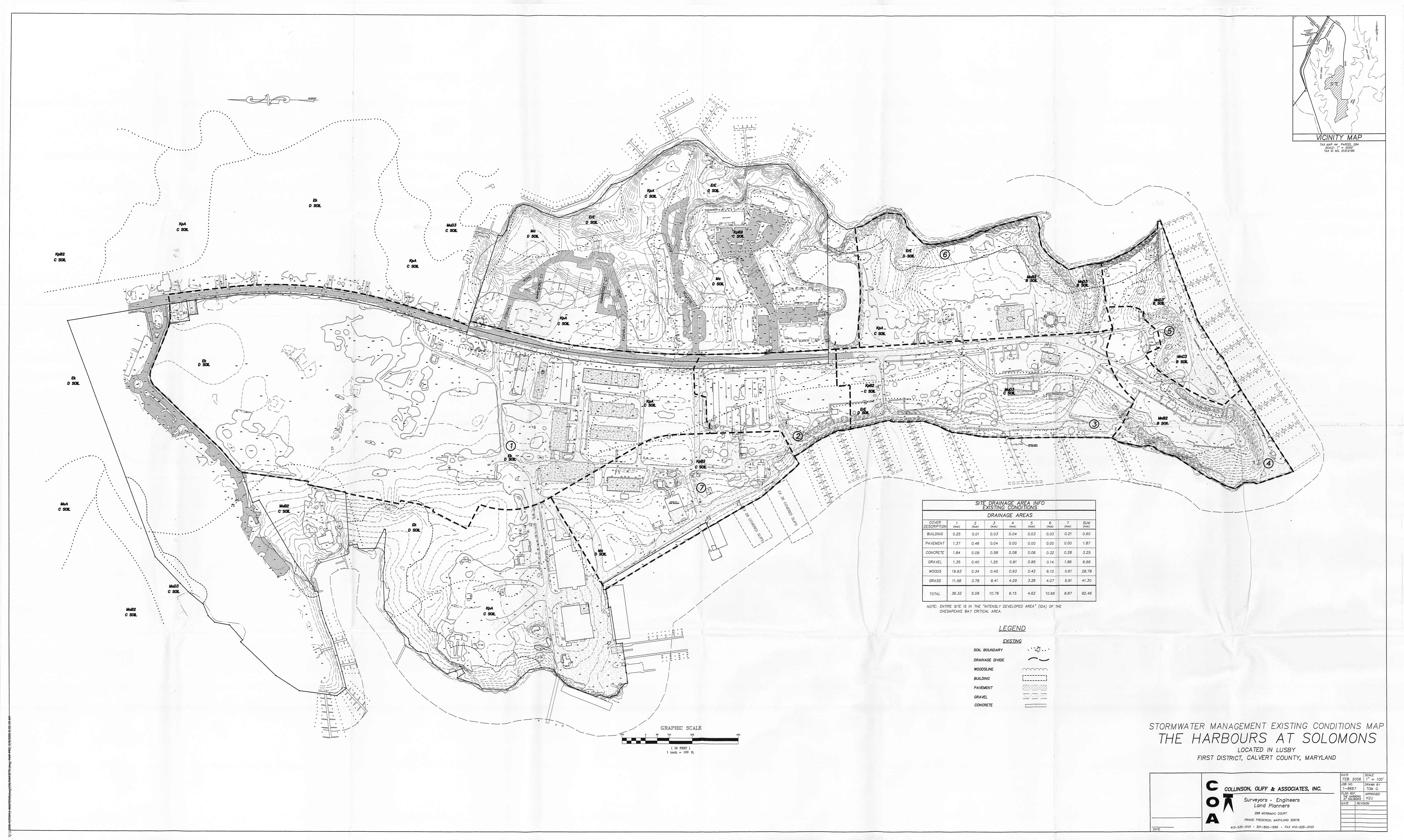
For the seven areas the following devices are planned to provide the required pollutant removal for the proposed Subdivision (See Code sheet in appendix B for device description).

<u>Area</u>	<u>Code</u>	Removal Rate	Removal Rate Required
One	P-4	31.8 lbs	32.5 lbs
	F-2 (Alleys)	0.7 lbs	
Two	F-1	4.0 lbs	4.3 lbs
	F-2 (Alleys & Drives)	0.3 lbs	
Three	P-3	8.0 lbs	8.5 lbs
	F-2 (Alleys & Drives)	0.6 lbs	
Four	P-3	4.0 lbs	4.0 lbs
Five	1-1	1.0 lbs	1.0 lbs
Six	F-6	4.9 lbs	4.9 lbs
	F-2 (Alleys)	0.1 lbs	
Seven	F-6 (15% paved area)	0.4 lbs	0.4 lbs

Note: In all areas Roof downspouts are to be booted to the closed storm drain system to direct runoff from rooftops to proposed BMP Devices.

With the construction of the proposed development in this manner this site can be developed in accordance with the <u>2000 Maryland Stormwater Design Manual</u> and the <u>Calvert County Stormwater Management Ordinance</u> dated July 2001.

Appendix A Pre & Post Developed Site Map



MSA_S-1829-5657





Ren Serey
Executive Director

STATE OF MARYLAND CRITICAL AREA COMMISSION CHESAPEAKE AND ATLANTIC COASTAL BAYS

1804 West Street, Suite 100, Annapolis, Maryland 21401 (410) 260-3460 Fax: (410) 974-5338

October 24, 2002

Olivia Vidotto Calvert County Planning and Zoning 150 Main Street Prince Frederick, MD 20678

Re: SD-02-08, Solomons Harbor (TM 44, Parcel 294)

Dear Ms. Vidotto:

Thank you for providing information on the above referenced subdivision. The applicant is requesting to subdivide a 95.84 acre parcel to create 246 lots, of which 80.34 acres and 243 lots would be within the Critical Area. The property is designated an Intensely Developed Area (IDA) and portions of the western and southern parcel boundary are Buffer Exempt Areas (BEAs). Portions of the property are currently developed with a commercial marina and facilities.

At this time, we are unable to complete our evaluation of this subdivision proposal due to the absence of specific environmental information for the site. We have the following comments regarding this subdivision proposal.

1) The property contains nontidal and tidal wetlands, which are not identified on the subdivision plan provided by the applicant. All Habitat Protection Areas, and wetlands, must be identified on the property and shown on a revised subdivision plan.

2) The 100-foot Buffer is identified incorrectly in several locations on the subdivision plan (refer to Sheets 6 and 10). These portions of the property are not Buffer Exempt Areas. The 100 foot Buffer must be delineated from the landward edge of tidal wetlands or mean high water, whichever is greater, and shown on a revised subdivision plan.

3) If present, steep slopes (greater than 15 percent) must be identified on the subdivision plan. The Buffer must be expanded for steep slopes. Without this information, we are unable to determine whether expansion of the Buffer is necessary.

4) Based on GIS information from the Department of Natural Resources, the property is identified on the Maryland Inventory of Historic Properties database. The applicant must request an evaluation of the property from the Maryland Historic Trust. A copy of their evaluation must be provided to this office.

Olivia Vidotto SD-02-08, Solomons Harbor October 24, 2002 Page 2

5) The applicant must request an evaluation of the property for rare, threatened and endangered species from the Department of Natural Resources. A copy of their evaluation must be provided to this office.

6) Development on Lots 15-19 and a playing field are proposed within the 100 foot Buffer (refer to Sheet 10). Development on Lots 3 and 4 are proposed within the 30 foot waterfront setback in a BEA (refer to Sheet 10). Development on Lots 3, 4, 10, 11, 12, and an unidentified Lot, are proposed within the 100 foot Buffer (refer to Block Q, Sheet 9).

Development activities are not permitted within the Buffer or waterfront setback in BEAs, except by variance. This office would not support the creation of new lots, recreational or stormwater facilities for which a variance would be required to develop.

7) Subdivisions in an IDA must demonstrate compliance with the 10% Rule for reductions in pollutant loads within the Critical Area. At this time, the applicant has not submitted 10% Rule worksheets (including existing and proposed impervious surface calculations) to this office for review. In addition, all stormwater best management practices and structures proposed on site must be shown on the subdivision plan. New stormwater best management practices and structures are not permitted within the Buffer or waterfront setback in BEAs.

Prior to local approvals, we request that the applicant submit a revised subdivision plan to this office for review and comment. The revised plan must address the information requested above. We will provide additional comments after evaluation of this information.

Thank you for the opportunity to provide comments. Please include this letter in your file and submit it as part of the record for this subdivision. Also, please notify the Commission in writing of the decision made in this case.

Sincerely,

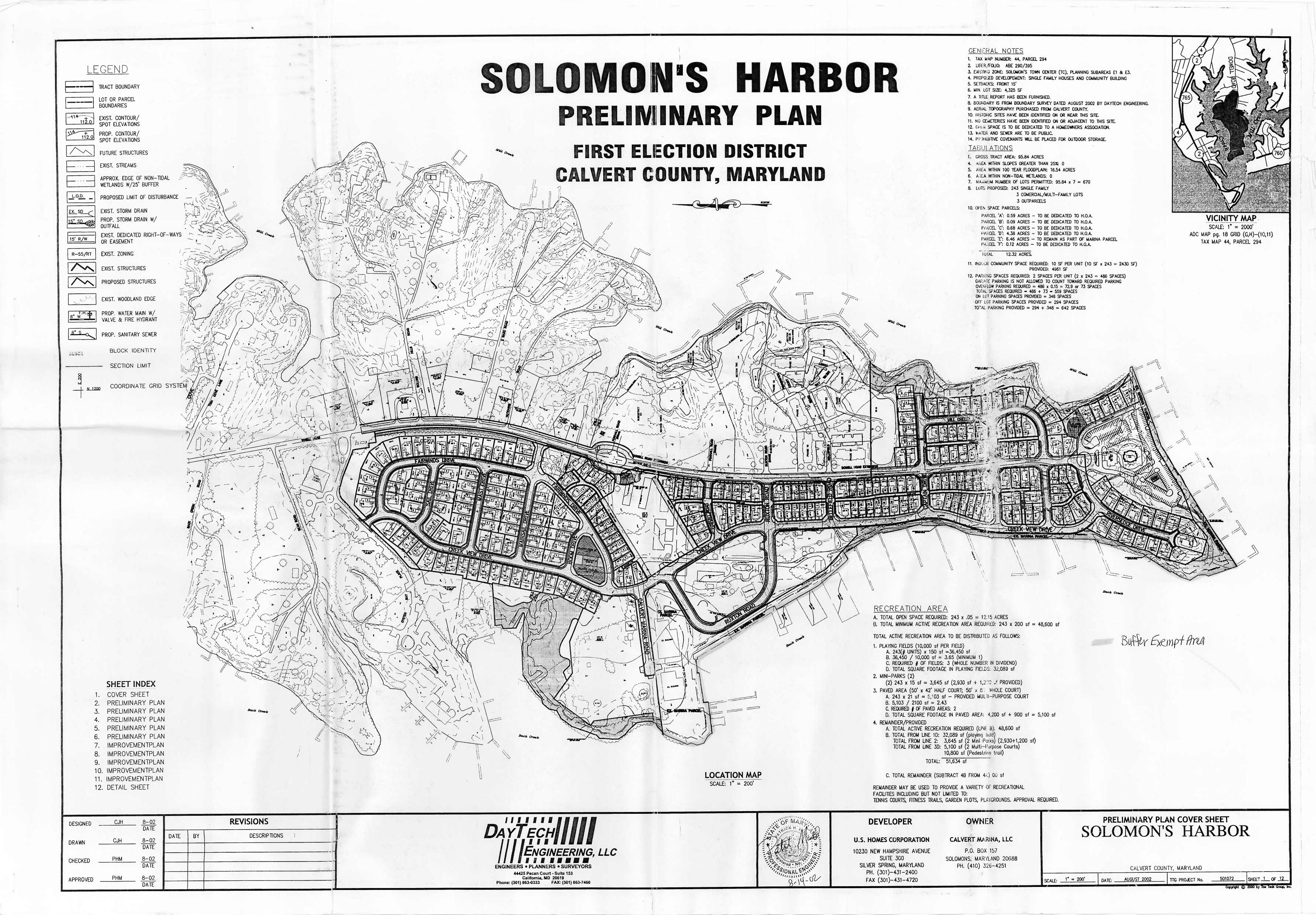
Julie V. LaBranche

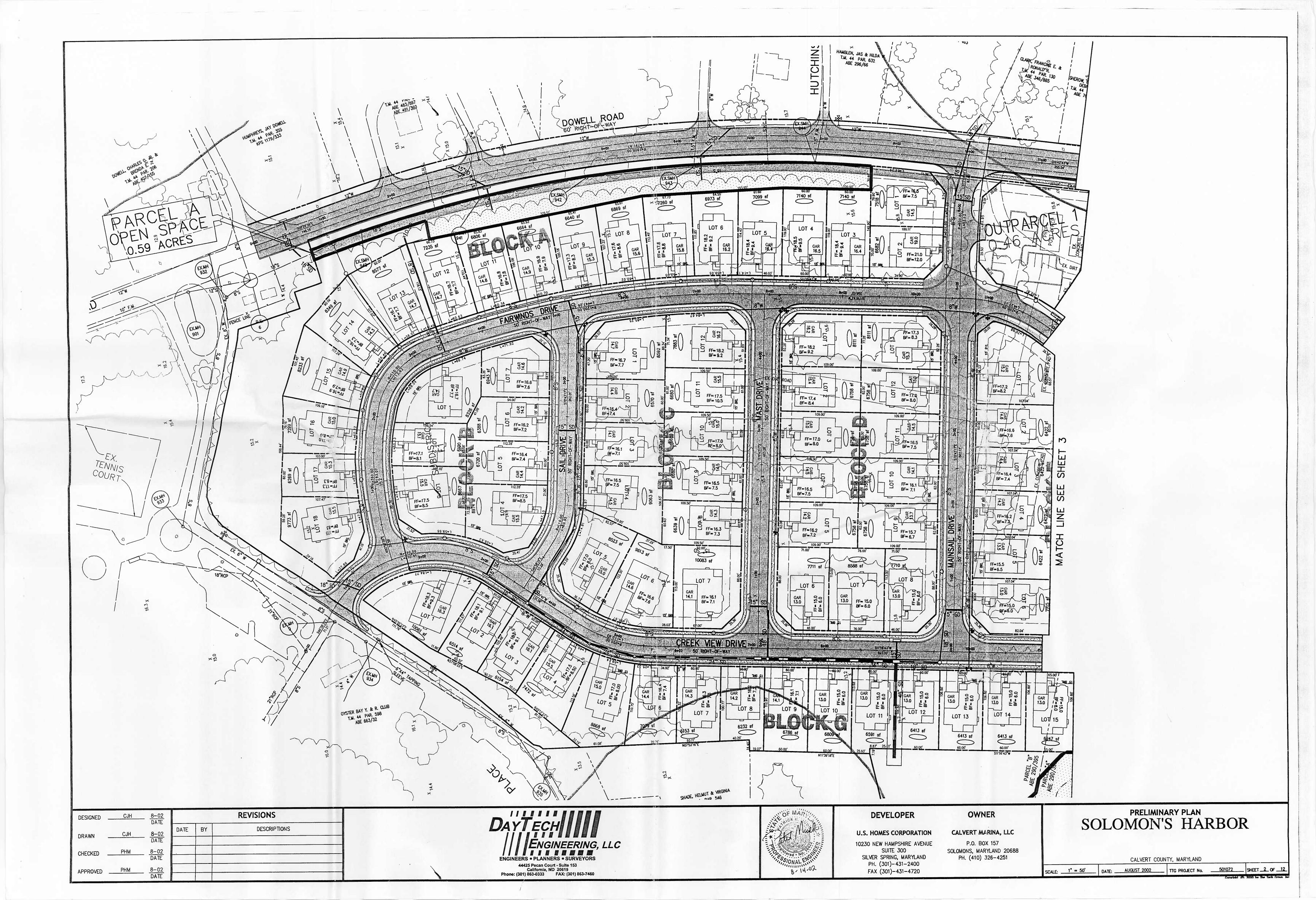
Natural Resource Planner

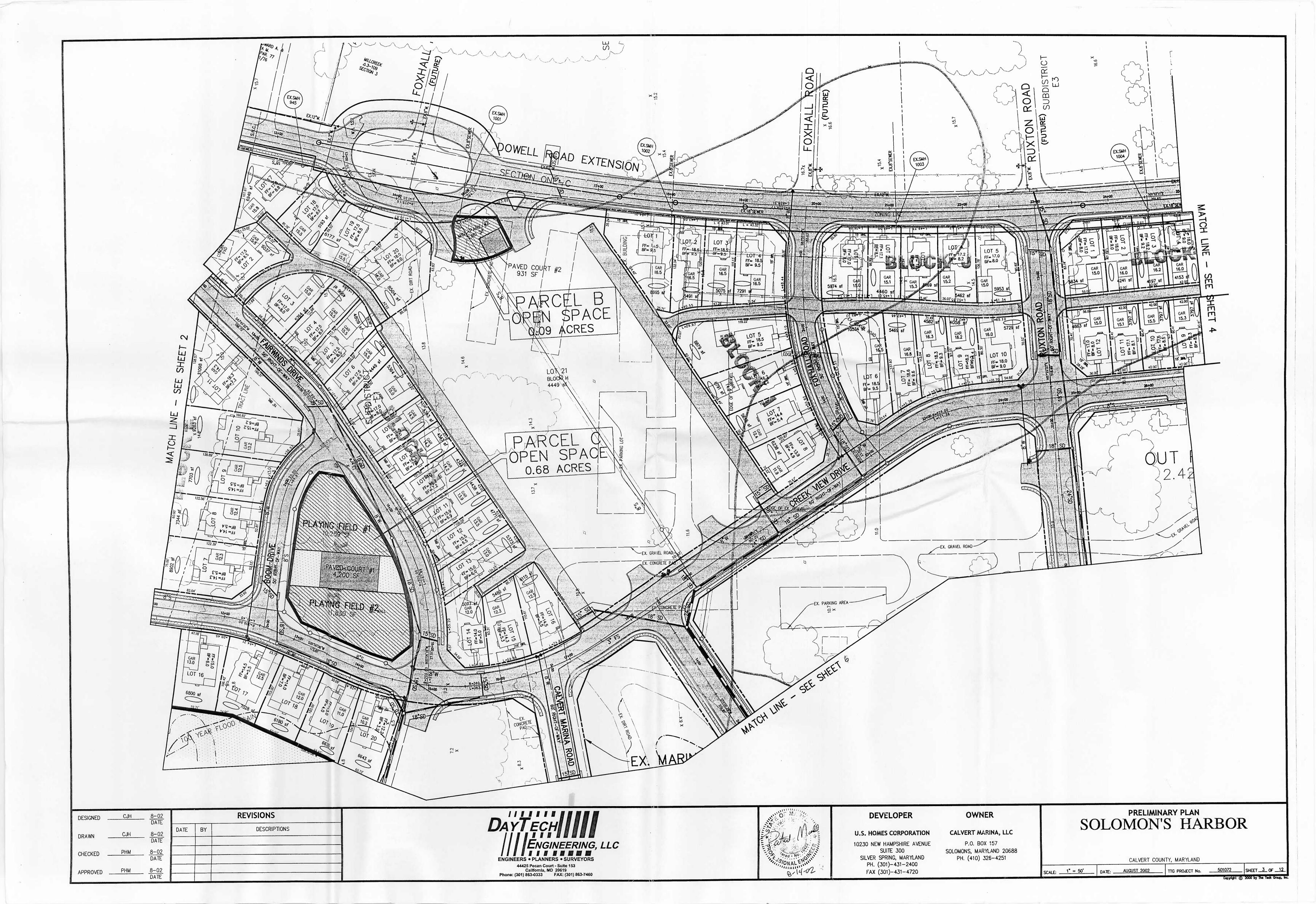
Juli V. JaBranche

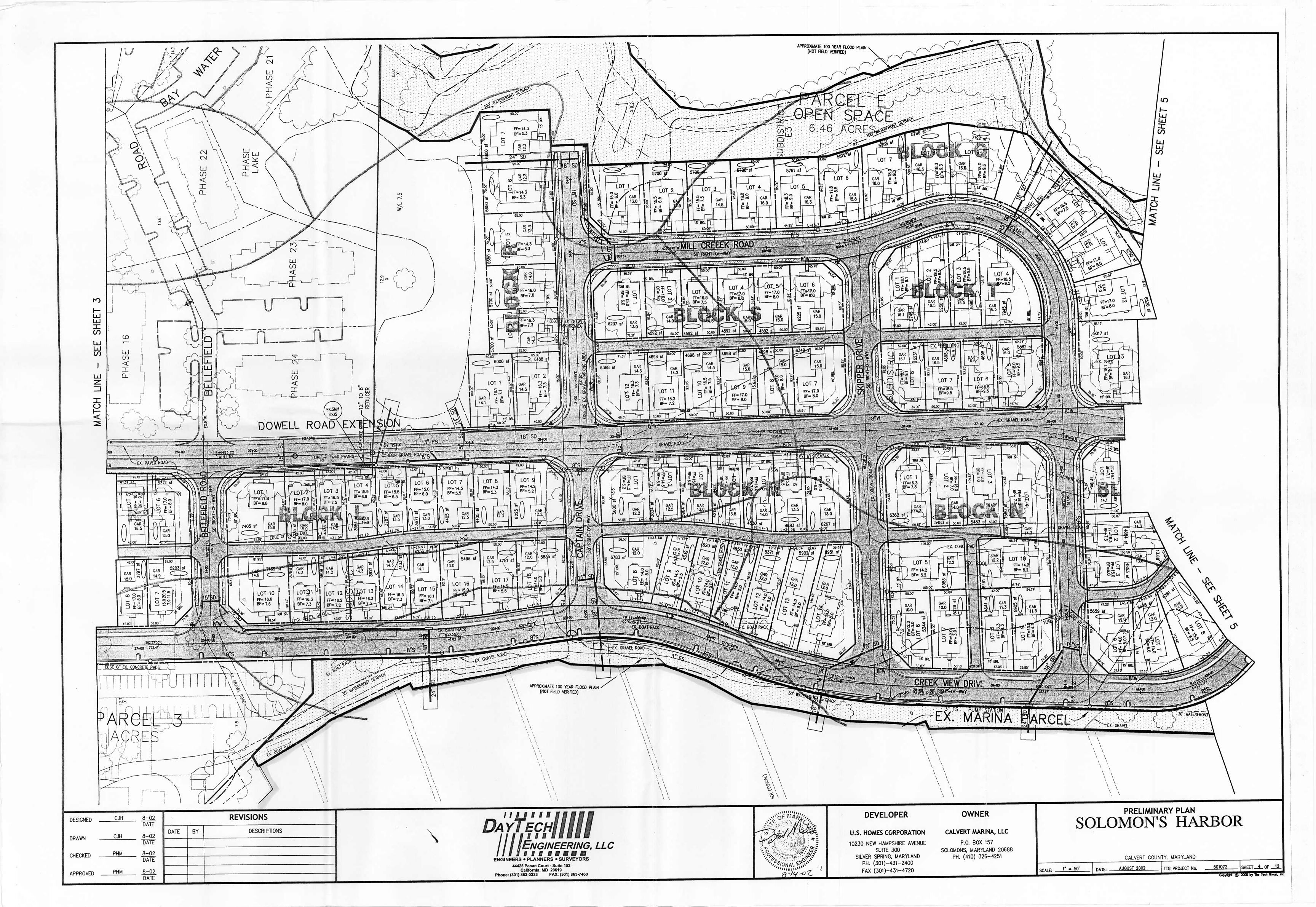
cc: Patrick Mudd (DayTech Engineering, LLC)

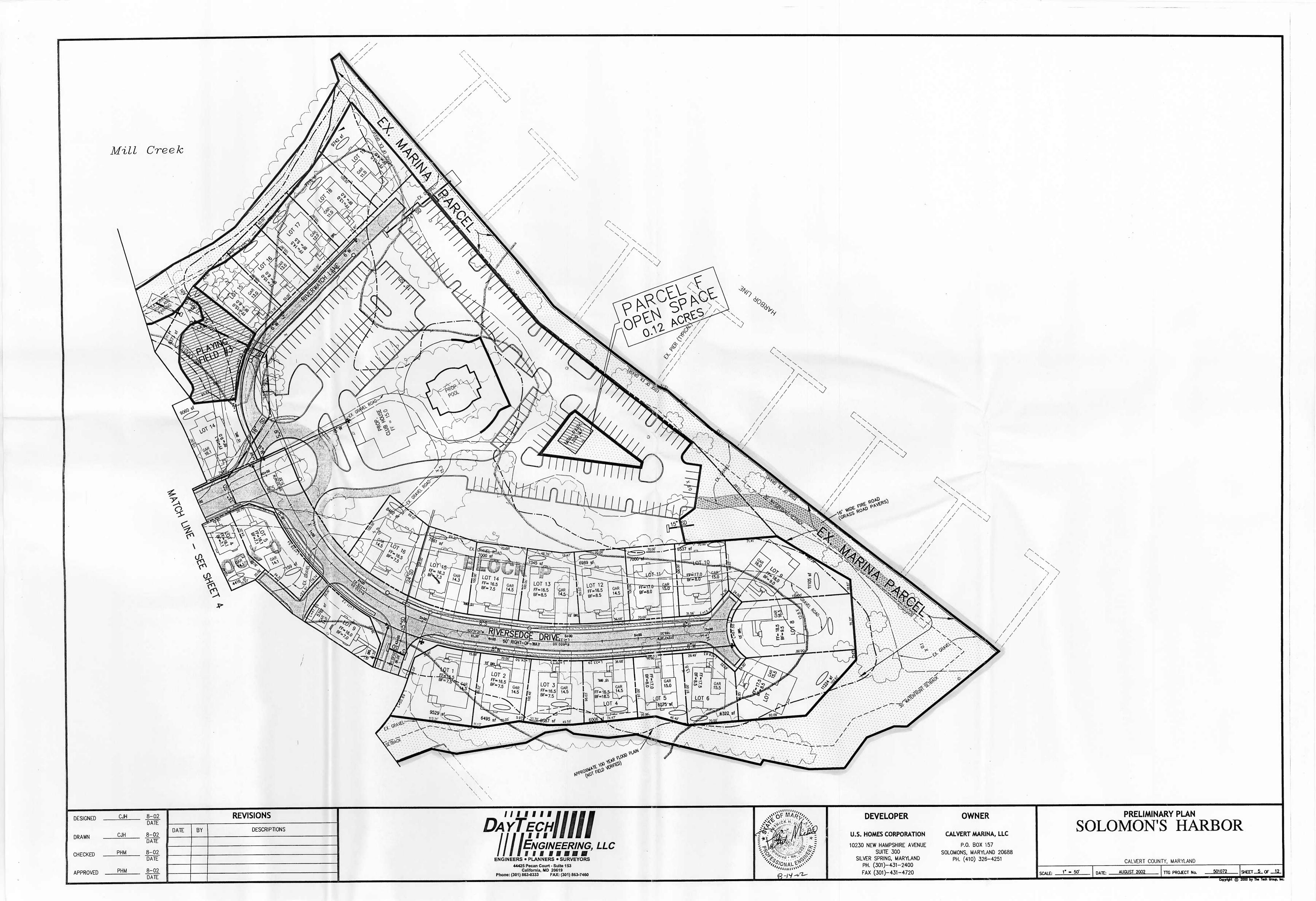
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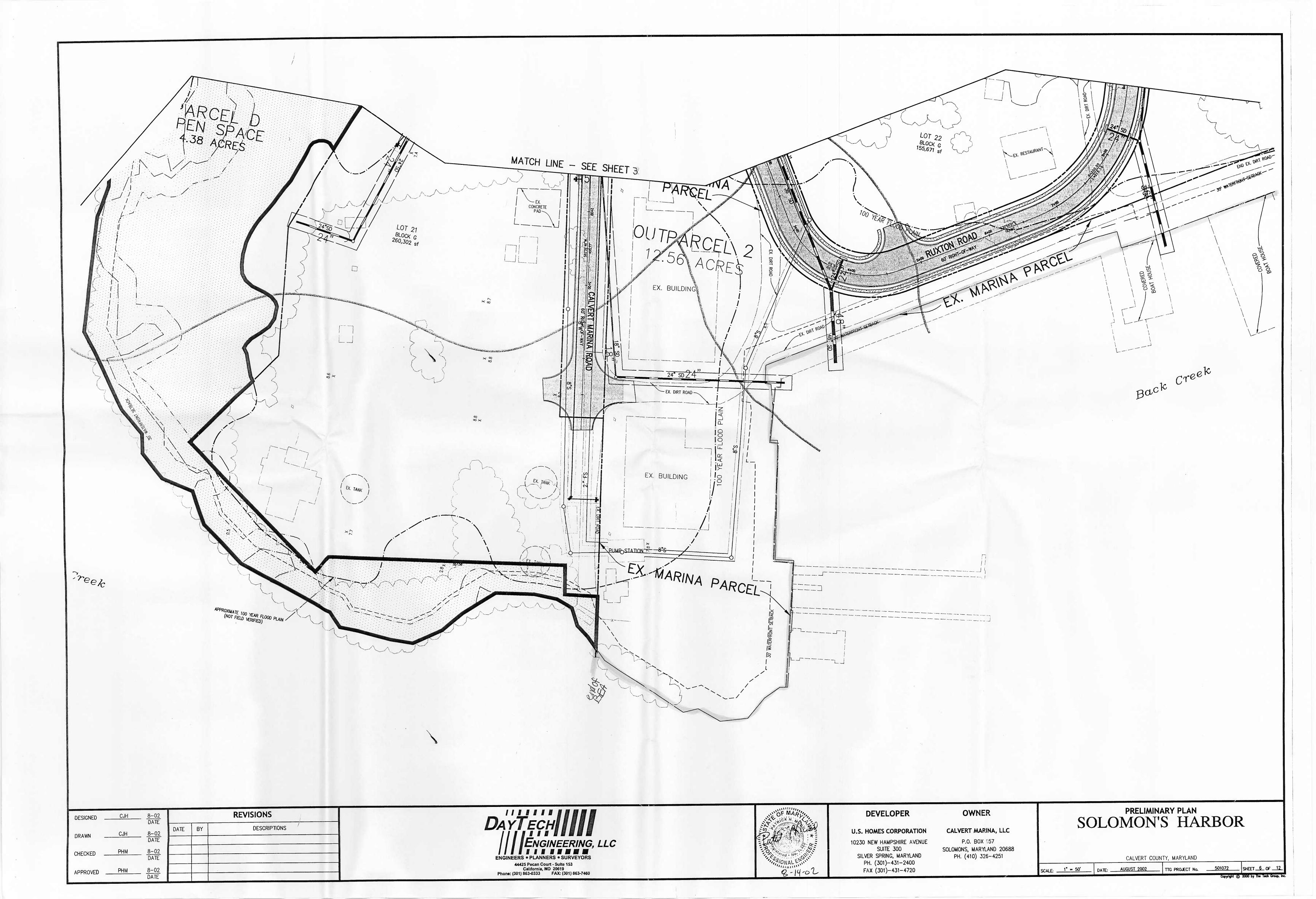




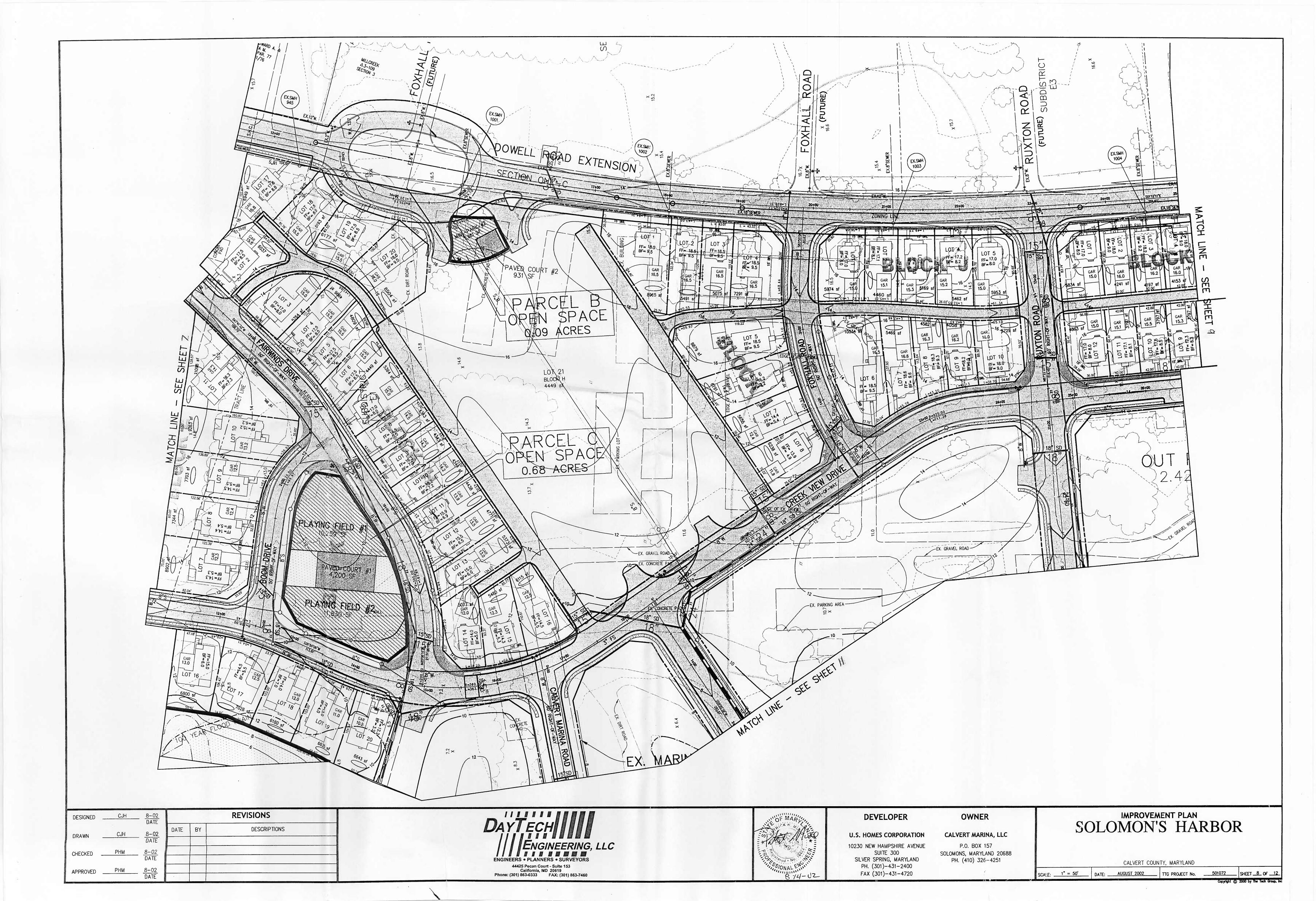


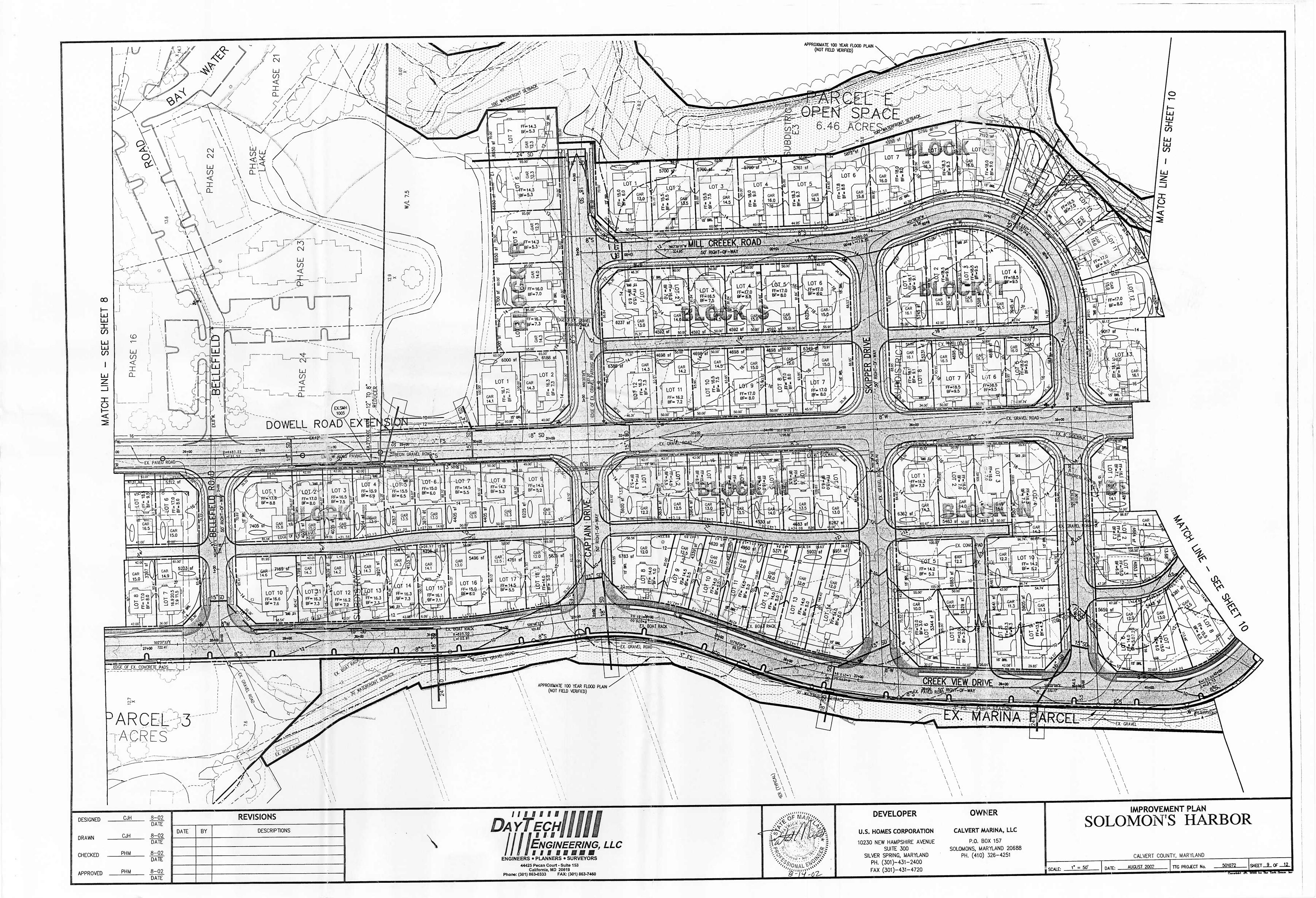




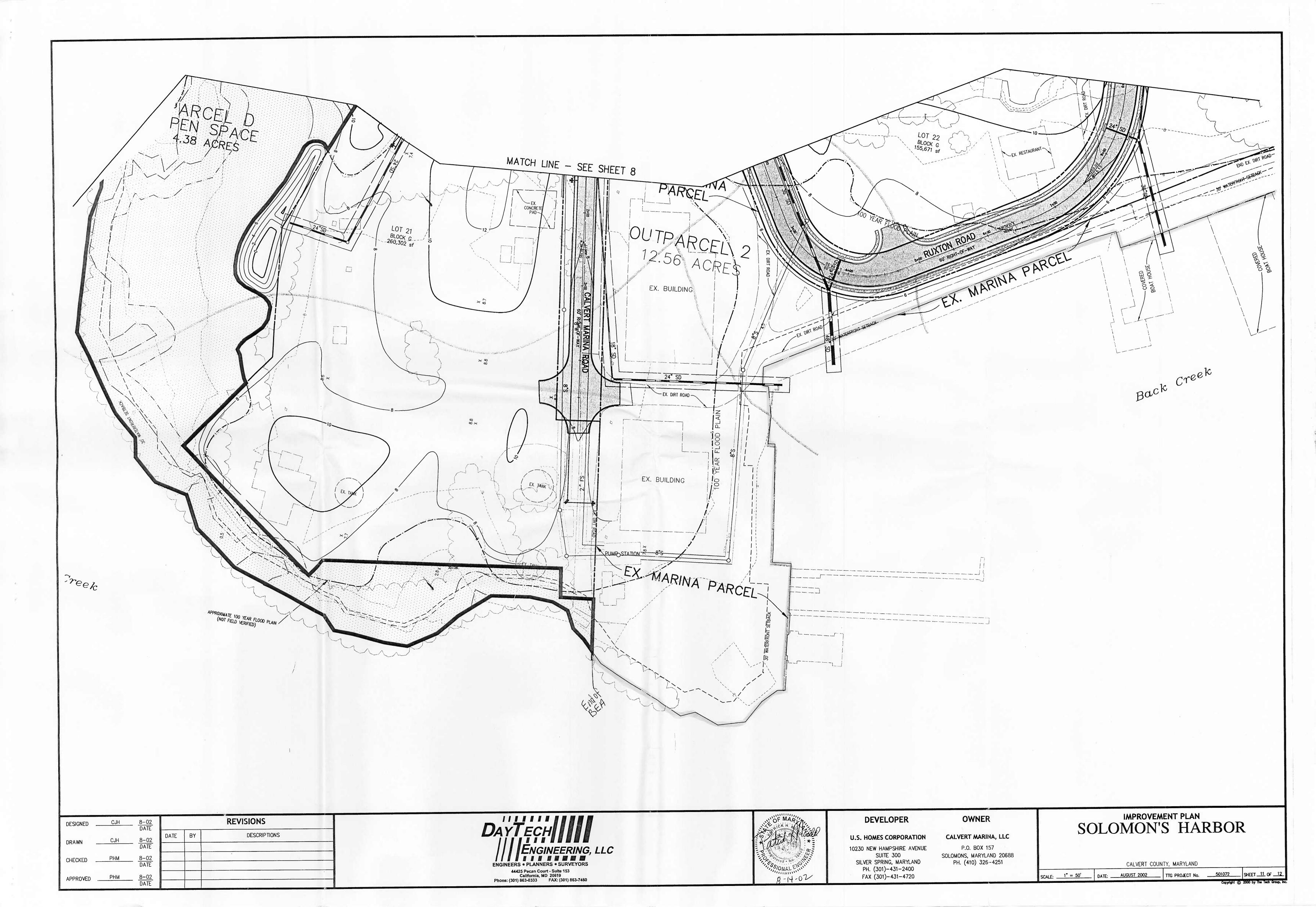


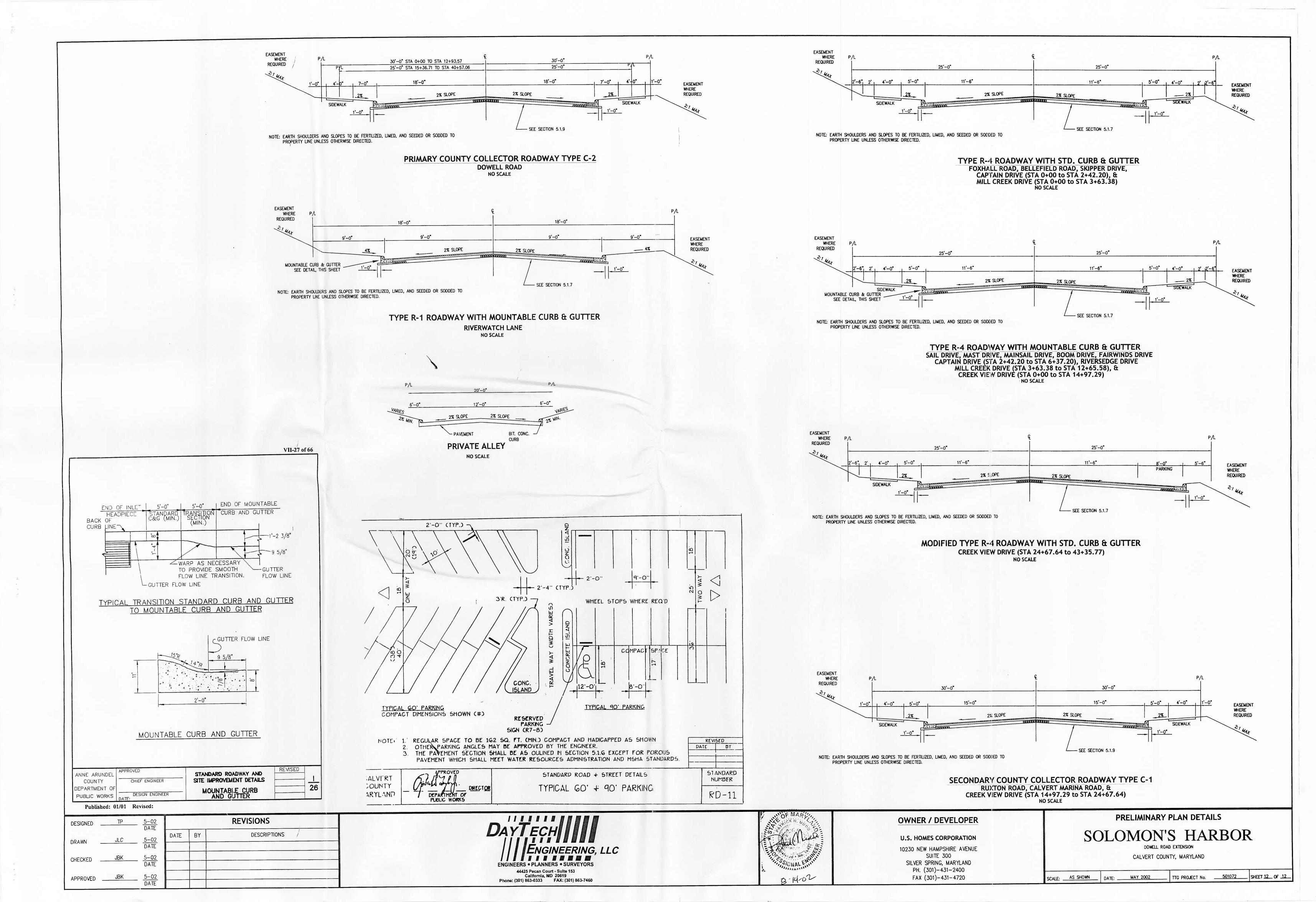












Take a drive to see the site of the nation's first amphibious training base.



UNITED STATES
NAVAL AMPHIBIOUS
BASE,
BASE,
SOLOMONS

P. O. Box 97
Solomons, MD 20688
410-326-2042
www.calvertmarinemuseum.com



For additional information about this and other museum events, contact us at:

gave their lives for our country. sacrifice of the thousands of their comrades who commemorate their participation and the have them and their families with us as we shipping out to war. We are honored to whom last visited the area just before who trained at the base, most of weekend is the presence of many of the "boys" flict. A vitally important part of the understand the part Solomons played in the conpresent generation better and equipped Marines onto the beach, help the plete with landing craft discharging 1940's-clad World War. Full scale landing exercises, com-Training Base to the winning of the Second recalls the contributions of the Amphibious commemoration "CRADLE OF INVASION" with activity. The annual Once each year, in August, the area comes alive

Funding for this brochure was received from Chesapeake Bay Gateways Network A program of the National Park Service.

This is just the first draft of this brochure.

The final version - complete with your suggestions - will be in full color, and will include quotes from some of the men who trained here.

Please take this brochure with you and use it as you drive around Dowell Peninsula and visit a piece of history. Then let us know how it worked. Was it helpful?

Was there anything confusing

Was there anything confusing

We have put together this driving tour brochure to help you find your way around the remains of the US Navy's first Amphibious

Training Base,
located in Solomons from 1942 - 1945.

Please Give Us Your Opinion

THE BIRTH OF THE AMPHIBIOUS NAVY

Few of the buildings remain, but there is still much to be seen at the site of the nation's first amphibious training base.

The heavyweight champion of the world visited Solomons. So did the governor of Maryland, senators, congressmen...admirals without number. One visitor was a world champion tennis player, another wrote for a famous magazine. There were also high school dropouts, farm boys, mechanics, and tough kids from the city streets. They came from all over the country.... They weren't drawn to the area's famous Chesapeake Bay oysters and crabs, they didn't come for the restaurants, the boating or the fishing; in fact many of them never knew that there was a town on nearby Solomons Island. What brought them together, men and boys not otherwise likely ever to have known each other, was different, very different. It was the early 1940's and the world was at war. The one thing that they all had in common was a military base, just being built, on the Dowell Peninsula the Naval Amphibious Training Base, Solomons. These were the men who would, quite literally, take the war to our enemy's shores...the men who would man the new, untested amphibious vessels of the United States Navy.



The joint doctrine of the Navy, Marine Corps, and Army followed long-held ideas of large, ocean-going transports ferrying men to the area of battle, and then moving them to shore from conventional, small craft lowered from the sides of the transports; a practice that had served U. S. forces well for hundreds of year. But it was hopelessly out of date for the kind of war we were going to be forced to fight in 1941. In early 1942, the

Navy established the nation's first base for training men in this new type of warfare on the Dowell Peninsula across the harbor from Solomons, in what was then nearly inaccessible, rural Maryland. The base, designed to accommodate about 2000 men and to prepare them for the planned invasion of North Africa, quickly filled the entire hundred and nine acre site, and soon greatly exceeded its capacity for training as well. At its peak, in the summer of 1944, the base had 10,150 men "aboard"! And the facility, built to train sailors and soldiers for the North African campaign, sent men to the U.S. fleets in both the Pacific and Atlantic Oceans.



Facilities for beach landing practice with the newly developed landing craft and ships were soon expanded to include the beaches at nearby Cove Point. All too often, though, especially in the early days of 1942, when the need was great and the time short, training at Solomons was likely to have been little more than a quick cruise on the Bay watching the school staff chief petty officers handle the boat and hopefully getting in a question or two. Men were often formed into crews in those first frantic months of the war without ever seeing the type of vessel they would be called upon to operate.

Stories of the inadequacies of the A.T.B. Solomons are many and date mostly from the first months of its existence. Later photographs show a much different base. It soon grew into a complex that turned out men trained in all areas of operations aboard the new "Gator" Navy. Gun emplacements, a firefighting school, signal masts, a school for steward's mates (often the only job available to African-Americans in the still-segregated Navy of the 1940s), even a full-scale mock up of an LC1 soon replaced the pasture and forest land on the Dowell Peninsula. By the time the base was closed, in early 1945, 68,000 men had been trained to take their place in America's fighting navy.

It's hard to think of those times now, as one wanders the site of the old base. Oh, the evidence is there. That old white house that once served as the commanding officers quarters is still there; the long, gray warehouses have a military-look; The sidewalks and foundations visible above the tall trees reveal a pattern familiar to anyone who has ever visited a military post. Sit on the concrete remains of the gun emplacements and gaze out toward the bay, and the feeling of those days is very close indeed.



Like everything else, time is catching up with the old base. Soon, the rapid development that is coming to every place on the Chesapeake Bay will take away many of the remnants of the A.T.B. Solomons. Efforts are underway to establish a permanent memorial to the men who served there. A seven-foot tall bronze, "On Watch" has been commissioned, and with the help of friends, will soon be in place overlooking the water entrance to the base on Back Creek. Visible to anyone coming or going to Solomons by water as well as from the land, "On Watch" will ensure that whatever changes come to the old peninsula, the presence of the men who trained there will always be remembered and honored.

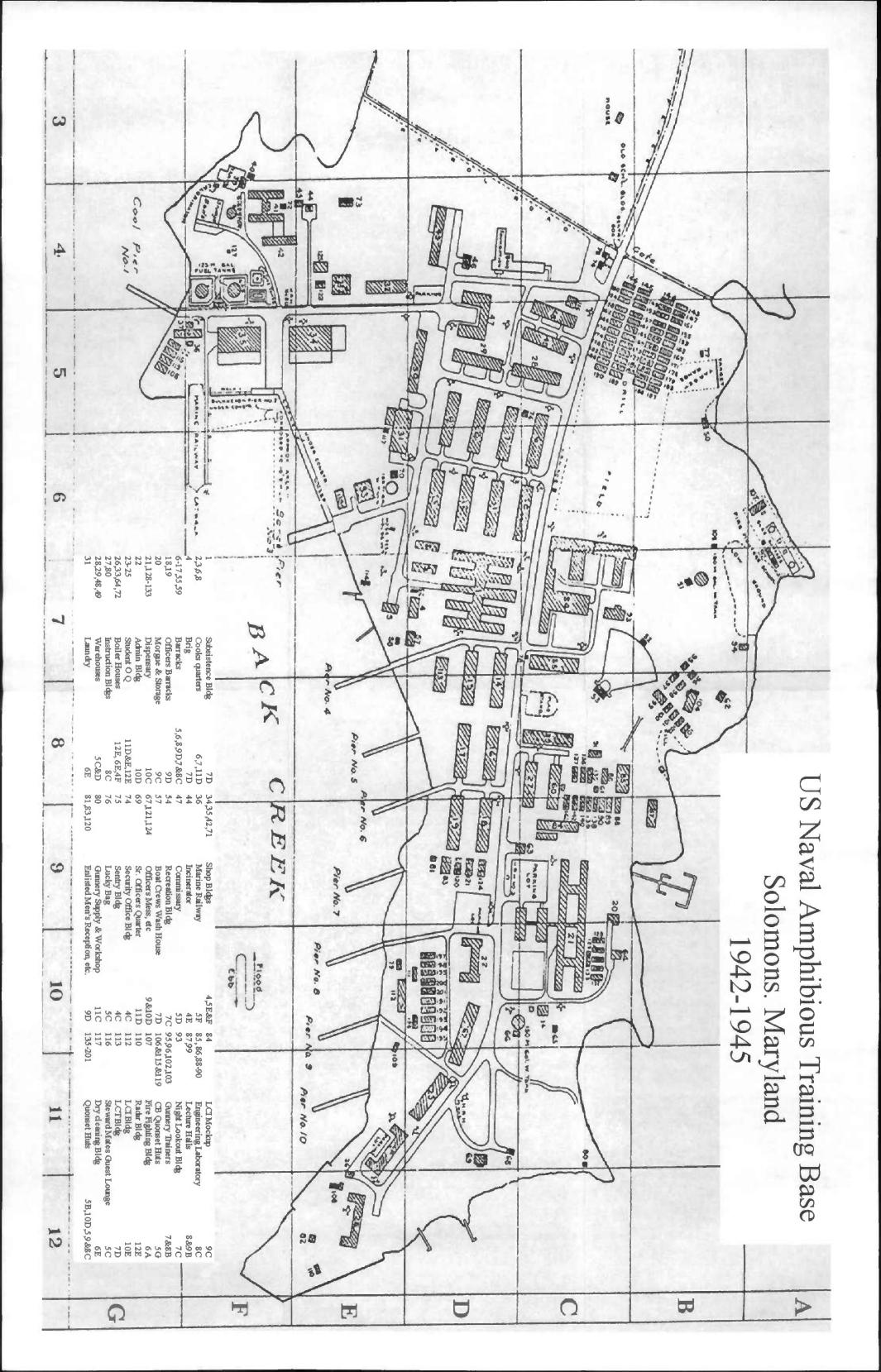
Quotes from those who trained here

"Solomons is...the only place in the world where you can

stand up to your neck in mud and still have dust blown in your face"

"Take all you can eat, but eat all that you take."

"Our barracks resembled overgrown chicken coops"



IN THE CIRCUIT COURT OF CALVERT COUNTY

PETITION OF:

MARTIN G. MADDEN

FOR JUDICIAL REVIEW OF THE DECISION OF THE

CALVERT COUNTY PLANNING COMMISSION

IN THE CASE OF

Preliminary Approval of Major Subdivision

Agency Case No.: SD-02-08A THE HARBOURS AT SOLOMONS

Case No. C 06-709

NUV 3 0 2006

CF. FICAL AREA COMMISSION Chesapeake & Atlantic Coastal Bays

STIPULATION OF DISMISSAL AND JOINT MOTION FOR REMAND

Martin G. Madden, Chairman of Maryland State Critical Area Commission for the Chesapeake and Atlantic Coastal Bays ("Critical Area Commission"), Petitioner, by its attorneys, J. Joseph Curran, Jr., Attorney General, and Marianne Dise, Assistant Attorney General; the Calvert County Planning Commission, the Agency, by its attorney, John Yacovelle, and CG-Solomons Marina, LLC, Respondent, by its attorneys, Timothy R. Henderson and Rich & Henderson PC, being all parties to this appeal and desiring to enter into this Stipulation of Dismissal and Motion for Remand of this matter to the Calvert County Planning Commission wish this Court to Consider that:

WHEREAS, this is an appeal from an action by an administrative agency filed pursuant to Maryland Rule 7-202 by Martin G. Madden, Chairman of the Critical Area Commission (hereinafter Petitioner);

WHEREAS, Petitioner filed this appeal in response to an action by the

Planning Commission of Calvert County, Maryland (hereinafter Planning Commission);

WHEREAS, CG-Solomons Marina, LLC (hereinafter CG-Solomons) submitted to the Calvert County Planning Commission the proposed subdivision known as SD 02-08A, Harbours at Solomons, Lots 1-252 (the "Proposed Subdivision");

WHEREAS, the Planning Commission granted preliminary approval of the proposed subdivision at its May 17, 2006 regular meeting; subject to CG-Solomons obtaining approval from Petitioner of certain issues.

WHEREAS, in order to preserve Petitioner's rights and interest,

Petitioner filed this Appeal challenging the Planning Commission's grant of
preliminary approval of the Proposed Subdivision to CG-Solomons;

WHEREAS, Calvert County, CG-Solomons and the Petitioner have negotiated a mutually acceptable resolution of the issues as set forth in the Letter of Understanding by and between CG Solomons Marina LLC, Calvert County Planning Commission, and State of Maryland Critical Area Commission of November 15, 2006 (hereinafter "Letter of Understanding");

WHEREAS, the Letter of Understanding is incorporated and made part of this Stipulation with the same force and effect as if fully set forth herein;

WHEREFORE, the Critical Area Commission being satisfied with resolution of all issues set forth in the Letter of Understanding and having no further disputes with the Planning Commission's preliminary approval of the Proposed Subdivision and CG-Solomons having the intent to satisfy the terms of

the Letter of Understanding, the parties respectfully request that this matter be dismissed and remanded to the Planning Commission for further administration consistent with the Letter of Understanding and the power and authority of that agency.

Marianne Dise, Esq.

Assistant Attorney General

State of Maryland

Critical Area Commission

1804 West Streeet

Annapolis, Maryland 21401

410 260 3466

Attorney for Martin G. Madden

Respectfully submitted,

Walter A. Reiter, III, Esq.

RICH & HENDERSON, PC

844 West Street

Annapolis, Maryland 21401

410 267 5900

410 267 5901 (fax)

Attorney for CG-Solomons

John Yacovelle, Esq.

Calvert County Planning Commission

8438 Mackall Road

Saint Leonard, Maryland 20685

888 819 3736

Attorney for Calvert County Planning Commission

IN THE CIRCUIT COURT OF CALVERT COUNTY

PETITION OF: MARTIN G. MADDEN		
FOR JUDICIAL REVIEW OF DECISION OF THE	FTHE	
CALVERT COUNTY PLANN COMMISSION	IING	Case No. C 06-709
IN THE CASE OF Preliminary Approval of Majo Agency Case No.: SD-02-08 THE HARBOURS AT SOLO	A :	1
	ORD	ER
The Joint Stipulation of	Dismissal and	Motion to Remand, having been read and
considered it is this	day of	, 2006 hereby:
ORDERED that this Ap	peal of the act	ion of the Calvert County Planning
Commission be and is DISMIS	SED and furth	er;
ORDERED that this ma	tter be remand	ed to the Calvert County Planning
Commission for further action.		
		· · · · · · · · · · · · · · · · · · ·

Judge Circuit Court for Calvert County

copies to: Marianne Dise, Esq.

John Yacovelle, Esq.

Walter A. Reiter, III, Esq.

JOHN A. YACOVELLE

8438 MACKALL ROAD
ST. LEONARD, MD. 20685
PHONE OR FAX 1-888-819-3736
EMAIL: yacovelle@direcway.com

MEMBER OF MAR Y ACOVELLE hughes.net
DISTRICT OF COLUMBIA BARS

November 27, 2006

Clerk, Circuit Court for Calvert County 175 Main Street Prince Frederick, Maryland 20678

RE: PRELIMINARY APPROVAL OF MAJOR SUBDIVISION THE HARBORS AT SOLOMONS CASE NO. C 06-709

Dear Clerk

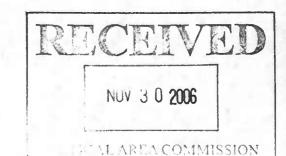
In the above matter, please find enclosed the following for filing:

- 1. Stipulation of Dismissal and Joint Motion for Remand;
- 2. Executed Letter of Understanding; and
- 3. Order for presentation to Judge Krug for execution if he finds it satisfactory.

Thank you for your cooperation.

Very truly yours,

JOHN A. YACOVELLE JAY:dky Cc: Marianne Dise, Esquire Timothy R. Henderson, Esquire



cone & Adamée Coastai Bays

IN THE CIRCUIT COURT OF CALVERT COUNTY

PETITION OF:

MARTIN G. MADDEN

FOR JUDICIAL REVIEW OF THE **DECISION OF THE**

CALVERT COUNTY PLANNING COMMISSION

Case No. C 06-709

IN THE CASE OF

Preliminary Approval of Major Subdivision Agency Case No.: SD-02-08A

THE HARBOURS AT SOLOMONS

ORDER

The Joint Stipulation of Dismissal and Motion to Remand, having been read and

considered it is this

day of December 2006 hereby:

ORDERED that this Appeal of the action of the Calvert County Planning

Commission be and is DISMISSED and further;

ORDERED that this matter be remanded to the Calvert County Planning

Commission for further action.

Circuit Court for Calvert County

CRITICAL AREA COMMISSION Chesapeake & Atlantic Coastal Bays

copies to: Marianne Dise, Esq.

John Yacovelle, AND DEC 18 Walter A. Reiter, III, Esq.

CALVERT CORCU Clerk of Circuit Court

CIRCUIT COURT FOR CALVERT COUNTY

Kathy P. Smith

Clerk of the Circuit Court

175 Main Street

Prince Frederick, MD 20678

(410)-535-1660, TTY for Deaf: (410)-535-4392

(410) 535-1600 ext. 2395 or Toll Free: 1-888-535-0113

Case Number: 04-C-06-000709 AE

Marianne Mason C4 Legal, Tawes Ofc Bldg. 580 Taylor Avenue Annapolis, MD 21401

FOLD HERE

J. Joseph Curran, Jr. Attorney General Donna Hill Staton Deputy Attorney General Maureen M. Dove Deputy Attorney General



STATE OF MARYLAND

OFFICE OF THE ATTORNEY GENERAL

DEPARTMENT OF NATURAL RESOURCES

FAX NO.:

(410) 260-8364

ROGER H. MEDOFF SHARA MERVIS ALPERT SAUNDRA K. CANEDO

Shara Mery is alperi Saundra K. Canedo Paul J. Cucuzzella Assistant Attorney8 General

Joseph P. Gill Assistant attorney general

PRINCIPAL COUNSEL

MARIANNE D. MASON

ASSISTANT ATTORNEY OWNERAL DEPUTY COUNSEL

STUART G. BUPPERT, II SHAUN P. K. FENLON RACHEL L. BISENHAUER

WRITER'S DIRECT DIAL NO.:

(410) 260-8351 mmason@dnr.state.m.us

June 14, 2006

Ms. Kathy P. Smith Clerk, Circuit Court for Calvert County 175 Main Street Prince Frederick. Maryland 20678

RE: Petition of Martin G. Madden for Judicial Review of Decision of Calvert County Planning Commission in Case No. SD-02-08A

Dear Madam Clerk:

Please find enclosed for filing, pursuant to Rule 7-202 (a), a Petition for Judicial Review on behalf of Martin G. Madden, Chairman, Critical Area Commission for the Chesapeake and Atlantic Coastal Bays. Pursuant to Rule 7-202 (d), I have enclosed a copy of the Petition for the Calvert County Planning Commission.

Annotated Code of Maryland, Courts and Judicial Proceedings Article §7-202(b) exempts the State from Circuit Court filing fees. Thank you for your assistance in this matter.

Sincerely,

Marianne D. Mason

Mariane Mason

Deputy Counsel

cc: Martin G. Madden

IN THE CIRCUIT COURT OF MARYLAND FOR CALVERT COUNTY

PETITION OF: MARTIN G. MADDEN, Chairman, Critical Area Commission for the Chesapeake and Atlantic Coastal Bays 1801 West Street, Suite 100 Annapolis, Maryland 21401

FOR JUDICIAL REVIEW OF

A Decision of the CALVERT COUNTY PLANNING COMMISSION Calvert County Services Building 150 Main Street Prince Frederick, Maryland 20678

In the Matter of:
Preliminary Approval of Major Subdivision
Case No. SD-02-08A,
THE HARBOURS AT SOLOMONS

CIVIL ACTION No.

PETITION FOR JUDICIAL REVIEW

Martin G. Madden, Chairman of the Critical Area Commission for the Chesapeake and Atlantic Coastal Bays, ("Chairman Madden") by his attorneys, J. Joseph Curran, Jr., Attorney General of Maryland, and Marianne D. Mason, Assistant Attorney General, pursuant to Maryland Rule 7-202, files this Petition for Judicial Review and states:

- 1. Chairman Madden hereby requests judicial review of the May 17, 2006 Decision of the Calvert County Planning Commission in the above-captioned matter No. SD-02-08A, The Harbours at Solomons, Preliminary Approval of Major Subdivision. The Planning Commission's Decision granted preliminary approved for a subdivision of land in Calvert County's Chesapeake Bay Critical Area.
- 2. Chairman Madden submitted written comments to the Planning Commission staff. Approval

of a new subdivision plat or approval of a site plan in the County's Critical Area constitutes a "project approval" under Annotated Code of Maryland, Natural Resources Article, §8-1811, which approval may not be granted unless the project approval is consistent with and complies with the Critical Area law.

3. Chairman Madden has standing and the right and authority to file this Petition for Review of the Planning Commission's project approval pursuant to Annotated Code of Maryland, Natural Resources Article, 8-1812(a) and (c).

Respectfully submitted,

J. JOSEPH CURRAN, JR. Attorney General of Maryland

Marianne D. Mason

Assistant Attorney General Department of Natural Resources

580 Taylor Avenue

Annapolis, Maryland 21401

(410) 260-8351

Attorneys for Martin G. Madden, Chairman Critical Area Commission for the Chesapeake and Atlantic Coastal Bays NORTH
AMERICAN
TITLE
COMPANY

Like Clockwork®

Formerly Sentinel Title Corporation



BETSTE RUSSELL

537 Baltimore Annapolis Blvd. *Seventa Park, Maryland 21146 Office: (410) 544-3000 Residence: (410) 544-4017 Fax: (410) 544-6067 Cell: (410) 952-9882 (bit Free: (888) 557-7975 Email: brussell@nat.com

Date March 17. DOUP	
PLEASE FORWARD THIS TRANSMITTAL T	O THE FOLLOWING:
ATTN: Ren Serery	
TO:	
FAX #: 410-974-5338	********
*********	******
Phone Number: 410 544-3000	
Number of pages (including cover	sheet) (3)
Additional information:	We will all cone to
	We will all come to
Dear Pero 1.	ung a meeting with
you Region à Clindia A	S.A.P. The Developer
you kegua & chudas A	Bill Cource -
FAX NUMBER: 410 544-6067	Dr. Toney Bushow
WE INVITE YOU TO CALL UPON US FO	R ALL YOUR SETTLEMENT NEEDS
WE INVITE YOU TO CAME BYON OF THE	E Ton Demy
We do not underst	and how the
Country can stop a	project and say
U pue 100	
Now its Buffer	applies when it
huller exempt	١- ،

FAX NO.

P. 02/04

P. 1

03/16/2006 16:04 FAX

Mar 14 08 02:46p

CLASSIC COMMUNITY CORP

Collinson, Oliff & Assoc

@ 001/003

4105353103

Collinson, Oliff & Associates, Inc.

PO Box 2209 rince Frederick, MD 20678 hone: 410-535-3101 - 301-856-1599

ax: 410-535-3103 mall: info@cosinc.com

BEFSIE RUSE	40-544-6067
To: 2000	Par: 3 1-015-642
Attn:	Phones 301-913-0404
From JOHNSKE BOM GE	RAID Pages 3 including cover
Date: March 14, 2006	cci
Project: The Harbours at Solomons	
Res Environmental Comments	
□ Urgent ☑ For Review □ Ploase	Comment Please Reply Please Recycle
• Comments:	
BIII,	
BILLY COLLEGED CE DE MULICIPE DOIICIE	ments. I have put a call into John Swartz to ask him for the standing item to the will probably have to make all the residents. I am forwarding this to Mat
John	
410 -	974-5338

Note: The information contained in this message may be privileged and confidential and protected from disclosure. If the resider of this message is not the intended recipient, or an employee or agent responsible for delivering this message to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have recalled this communication in error, please notify us immediately. Thenk you, C.O.A. Inc.

14 05 02:46p

Collinson, Oliff & Assio. 4105353103

P. 2

MAJOR SUBDIVISION REVIEW

DEPARTMENT OF PLANNING AND ZONING

DATE:

March 10, 2006

MEMO TO:

Carolyn Sunderland

Principal Planner

VIA:

Olivia Vidotto

Subdivision Planner

MEMO FROM:

John Swartz

Planner I

RE:

SD-02-08A

The Harbore at Solomons

HOWS THAT NEED NOW

Comments of Planning and Zoning Environmental Review:

1. Currently there are no regulations governing subdivisions in buffer exempt IDA areas, therefore this subdivision must hold a 100' buffer in the Critical Area, or wait until the regulations are modified.

Please show the calculations used to determine the number of slips available for this

Show the lateral lines and 25-foot setbacks.

A covenant shall be placed on the plat that prombits piers on individual lots.

Provide the length of shoreline to aid in determining the amount of slips permitted as in Section 9-7,05 of the Calvert County Ordinarce. 6.

Community piers are expressly for the use of los owners, or tenants, and may not be used or rented by any other person. Place a note on the plat to that effect.

A community pier requires an access road or drive be constructed, a turn around and at least one parking space for every three slips. These areas must be stabilized in a pervious manner or be placed out of the 100- for buffer. 8.

Piers and mooring pilings must be 10 feet from the mapped harbor line. 9.

State and Federal pecuits must be provided prior to construction of piers or mooring

A 10. Development in the IDA requires that there be a 0% reduction in pollutants. Please show or describe these Best Management practices as required by Scotton 8-1.01.h. These off-sets shall be approved by the County Rugineer.

CLASSIC COMMUNITY CORP

Callinson, Oliff & Assop. 4105353103

P . 3

Where the walkway crosses non-tidal wetlands impacts to wetlands or buffers require State/Federal permits.

Walkways and paths should remain pervious

JO FRI 1.

//2006 16:04 FAX

Har 14 06 02:46P The extent of the parcel shoreward of the new development or redevelopment shall be required to remain or shall be established in returnal vegetation. Areas in the 100-foot buffer and 30- foot buffers as in Parcel "G" shall be replants and bounded. Please provide a planting plan and schedule for the planting. 14.

Architectural review will be required prior to ssuance of building permits.

DEPARTMENT OF THE ARMY



BALTIMORE DISTRICT, CORPS OF ENGINEERS

10 SOUTH HOWARD STREET

BALTIMORE, MARYLAND 21201

August 22, 2001

Subject: CENAB-OP-RMS(CALVERT MARINA AND OYSTER COVE)01-02241-4

Calvert Marina and Oyster Cove c/o McCarthy and Associates, Inc. 14458 Old Mill Road, Suite 201 Upper Marlboro, Maryland 20772

Gentlemen:

This is in reference to your letter dated July 30, 2001, requesting a jurisdictional determination (JD) and verification of the delineation of Waters of the United States of Back Creek and Mill Creek, off the Patuxent River, including jurisdictional wetlands, on your property located off Dowell Road at Solomon's Landing, Calvert County, Maryland.

A field inspection was conducted on August 10, 2001 by Ms. Kathy Blagburn. This inspection indicated that the delineation of Waters of the United States, including jurisdictional wetlands, on the drawing enclosed with your request dated July 30, 2001, is accurate as noted on the enclosed maps dated February 7, 2001. Those areas indicated as Waters of the United States, including tidal or non-tidal wetlands are regulated by this office pursuant to Section 10 of the River and Harbor Act of 1899 and/or Section 404 of the Clean Water Act. Enclosed is a document that outlines the basis of our determination of jurisdiction over these areas.

Please note that on March 28, 2000, an administrative appeals process was established for JDs. Enclosed is a JD appeals form that can be used if you believe the JD you received warrants further review. You may accept this JD, submit new information seeking reconsideration of the JD or appeal the JD. If you accept the JD, you do not need to notify the Corps. A JD will be reconsidered if you submit new information or data to the Baltimore District Engineer (DE) within 60 days from the date of this letter. If you decide to appeal the approved JD, please submit the attached form within 60 days from the date of this letter to our Division Engineer at the following address:

Commander, U.S. Army Corps of Engineers North Atlantic Division Building 301 Fort Hamilton Military Community Brooklyn, NY 11252-7600. If we do not hear from you within 60 days, we will consider this JD accepted by you. This approved JD is valid for five years from the date of issuance unless new information warrants a revision before the expiration date.

You are reminded that any grading or filling of Waters of the United States, including jurisdictional wetlands, is subject to Department of the Army authorization. State and local authorizations may also be required to conduct activities in the locations. In addition, the Interstate Land Sales Full Disclosure Act may require that prospective buyers be made aware, by the seller, of the Federal authority over any Waters of the United States, including jurisdictional wetlands, being purchased.

I am forwarding a copy of this letter to the Maryland Department of the Environment. If you have any questions concerning this matter, please call Ms. Kathy Blagburn of this office at (410) 962-5690.

Sincerely,

Sandra A. Zelen

Enforcement Program Manager

BASIS OF JURISDICTIONAL DETERMINATION

The jurisdictional determination outlined in the attached letter was based on the

Date: August 14, 2001

Applicant: Calvert Marina and Oyster Cove File No.: 200102241

following:
A. There are no Waters of the United States present at the site. Does not meet any of the items listed below
XXX B. The Waters of the United States present at the site are currently used, or were used in the past, or may be susceptible to use in interstate of foreign commerce This includes waters which are subject to the ebb and flow of the tide.
$\underline{\hspace{0.5cm}}$ C. The Waters of the United States at the site are interstate waters, including interstate wetlands.
D. The Waters of the United States at the site are other waters such as intrastate lakes, rivers, streams (including intermittent streams, mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes or natural ponds containing a nexus to interstate commerce). The nexus to interstate commerce consists of: recreational or other purposes
fish or shellfish
<pre>industrial or commercial purpose habitat for migratory birds or game birds or wildlife commercial saleable timber products sand, gravel, oil, gas or other commodities of commerce other</pre>
E. The Waters of the United States present at the site contain impoundments of waters otherwise defined as Waters of the United States
XXX F. The Waters of the United States present at the site are part of a tributary system to waters identified in B-E above.
$\underline{\hspace{0.5cm}}$ G. The Waters of the United States present at the site are part of the territorial seas.
XXX H. There are wetlands present at the site which are adjacent to waters identified in B-G above.
2. The lateral extent of the Waters of the United States, including wetlands at the site identified on the accompanying map was based on one or more of the following:
XXX A. The presence of wetlands has been determined by the U.S. Army Corps of Engineers 1987 Wetlands Delineation Manual and guidance supporting the manual.
XXX B. Ordinary high water mark, mean high water mark, high tide line, mean high tide line.
KOthy Hagbun
Project Manager

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Kevin M. McCarthy	File Number: 200102241	Date: AUG 2 2 2001
Attached is:		See Section Below
INITIAL PROFFERED PERMIT (Standard Permit or Letter	of Permission)	Α
PROFFERED PERMIT (Standard Permit or Letter of Permi	В	
PERMIT DENIAL		С
APPROVED JURISDICTIONAL DETERMINATION		D
PRELIMINARY JURISDICTIONAL DETERMINATION		E

SECTION 1 - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://usace.army.mil/inet/functions/cw/cecwo/reg or Corps regulations at 33 CFR Part 331.

- A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.
- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final
 authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your
 signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights
 to appeal the permit, including its terms and conditions, and approved jurisdictional determinations (JD) associated with the
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.
- B: PROFFERED PERMIT: You may accept or appeal the permit.
- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final
 authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your
 signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights
 to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the
- C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.
- D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.
- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the
 date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative
 Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be
 received by the division engineer within 60 days of the date of this notice.
- E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to

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REASONS FOR AP proffered permit in o	PPEAL OR OB.	JECTIONS: (atements. You	Describe you u may attach	r reasons	for annealing	the decision	or your object	tions to an initio
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ADDITIONAL INFo ecord of the appeal larify the administration ou may provide add	ative record. N	meeting, and leither the ap- ition to clarify	any supplement of the street of the location	ental infor c Corps n of inforn	mation that the part of the mation that is	ne review off information of already in the	icer has deter	mined is needed
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Click here for a plain text ADA compliant screen.



Maryland Department of Assessments and Taxation CALVERT COUNTY Real Property Data Search

Go Back View Map New Search **Ground Rent**

Account Identifier:

District - 01 Account Number - 012185

Owner Information

Owner Name:

CALVERT MARINA LLC

SOLOMONS MD 20688-0157

COMMERCIAL

Sub District

Principal Residence:

NO

Mailing Address:

PO BOX 157

Deed Reference:

1) KPS/ 1147/ 580

2)

Location & Structure Information

Premises Address

14415 DOWELL RD

Grid

Map

Legal Description

92.43 AC

DOWELL 20629

Parcel

Primary Structure Built

1960

END OF DOWELL ROAD

MILL CREEK & BACK CREEK Assessment Area

Plat No: Plat Ref:

16 Special Tax Areas

Town **Ad Valorem**

WATERFRONT

Subdivision

Tax Class

Section

Property Land Area 92.15 AC

County Use

Stories

Basement

Type

Block

Lot

Exterior

Value Information

Base Value

Value As Of 01/01/2006 Phase-in Assessments As Of

5,839,100

Enclosed Area

36,973 SF

07/01/2005 07/01/2006

Improvements: Total: **Preferential Land:** 5,465,300 998,400 6,463,700

2,176,000 8,015,100

6,463,700

6,980,833 0

As Of

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Transfer Information

Seller: CHARLES A GAMBRILL SONS

Land:

10/14/1982 Deed1: KPS/ 1147/ 580 Price: \$2,837,608 Deed2:

Type: IMPROVED ARMS-LENGTH Seller:

Date: Deed1: Price: Deed2:

Type: Seller: Type:

Date: Deed1: Price: Deed2:

Exemption Information

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Partial Exempt Assessments County

Class 000 000

07/01/2005 0 0

07/01/2006 0

0

0

State Municipal 000

Tax Exempt: **Exempt Class:** NO

Special Tax Recapture:

* NONE *

